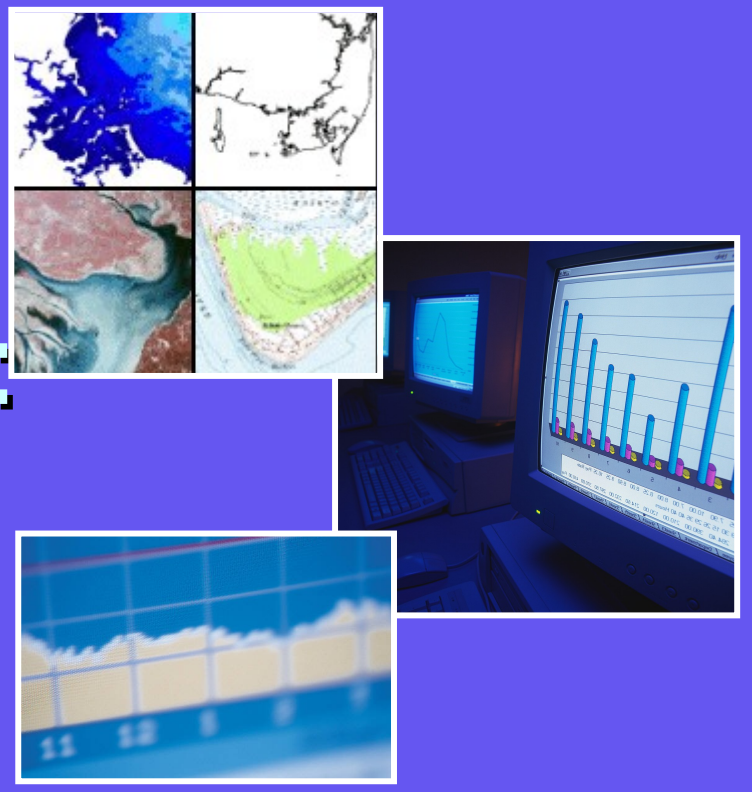
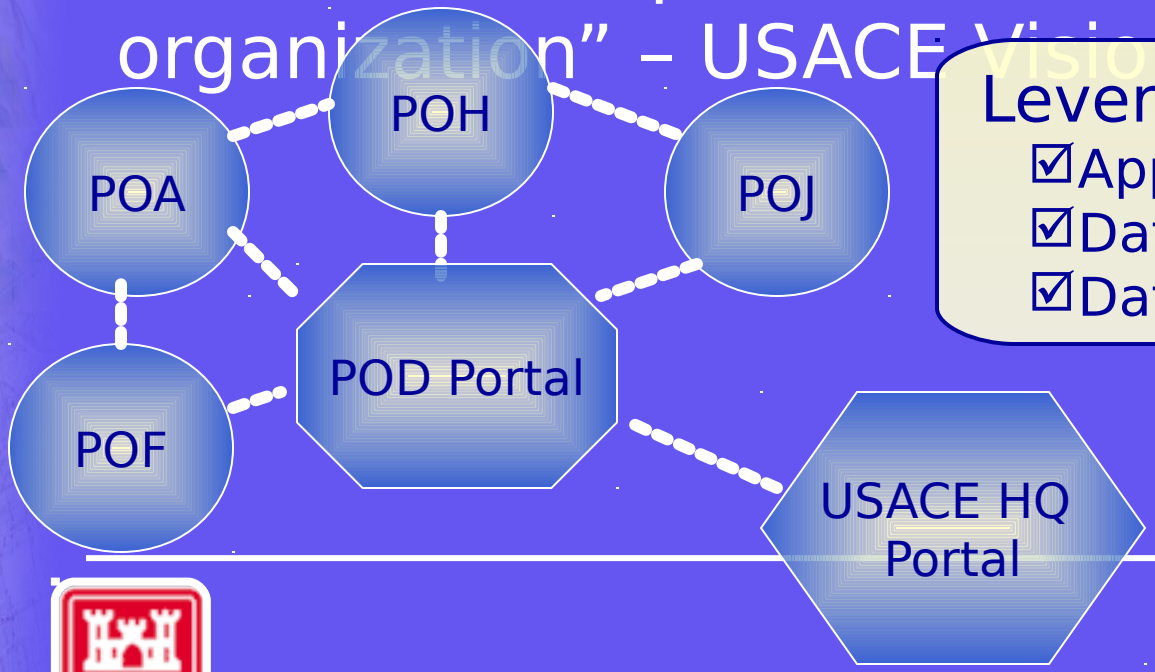
Enterprise GIS: eCoastal



Rose Dopsovic
US Army Corps of Engineers
Mobile District

Enterprise GIS – USACE Goal

- "Integrated geospatial technology infrastructure delivering spatial information products, services and standard datasets to all business elements and processes of the organization" – USACE Vision



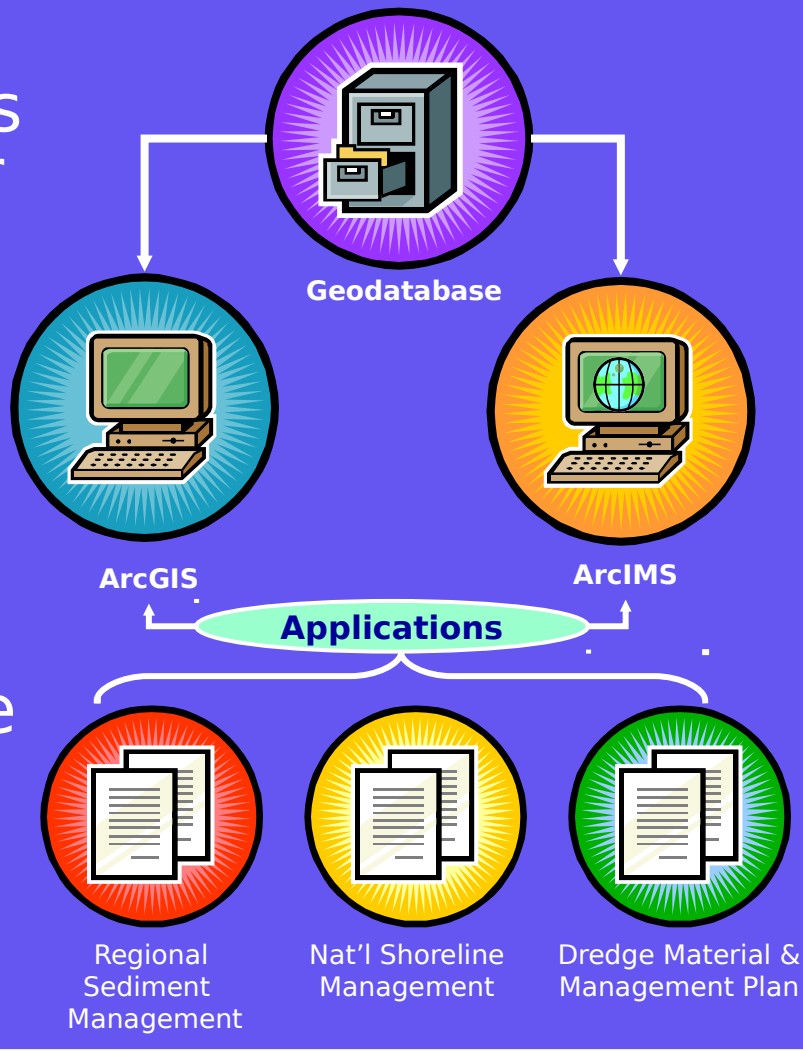
Leveraging:
- ☑Applications
- ☑Data References
- ☑Database Structure

Why Division Approach?

- Supports Regional Business Center
- Increase productivity
- More efficient use of resources
- Propagate effective, more accurate and informed decision-making
- Increase access and dissemination of digital information

eGIS Architecture Overview

- The geodatabase serves as the data repository for all spatial data accessed by the enterprise GIS applications.
- An enterprise geodatabase template has been created. This template includes feature classes that are compliant with the Spatial Data Standards.

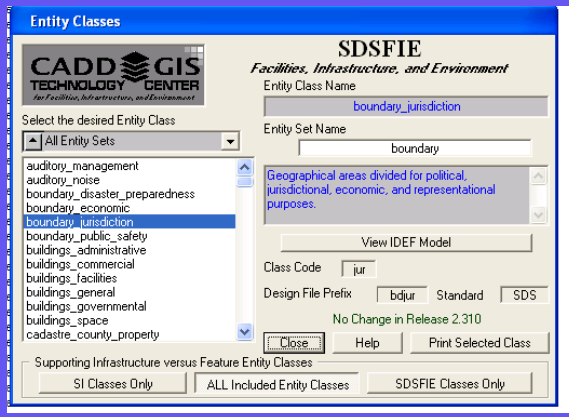


Spatial Data Standards

- The ***Spatial Data Standard for Facilities, Infrastructure, and Environment*** (**SDSFIE**) provides a standardized grouping of geographically referenced (i.e., geospatial) features (i.e., real-world features or objects depicted graphically on a map at their real-world location (i.e., coordinates).
- Each geospatial feature has an "attached" attribute table containing pertinent data about the geospatial feature.
- The SDSFIE is the only "nonproprietary" GIS data content standard designed for use with the predominant commercially available off-the-shelf GIS and CADD and relational database software.

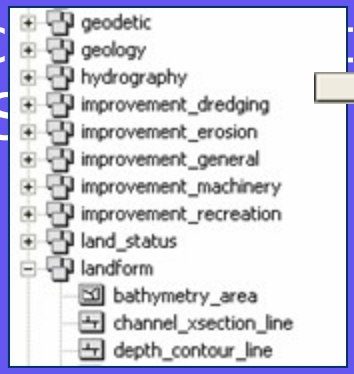
Spatial Data Standards

- The USACE eGIS program desired a standardized Geodatabase to
  - Allow custom GIS applications could be built upon a common framework.
  - Allow easy distribution of applications with little to no reprogramming.
  - Allow easy data sharing across various Corps Districts and the public.
  - Have an easy and cost effective way for distribution to other Districts.



Spatial Data Standards

- Spatial Data Standards define the nomenclature of the feature datasets, feature classes, and attribution of all features stored within the geodatabase.
- This standardization allows the data and custom applications, that interface directly with datasets, to be easily shared among other distric hose agencies using Spatial Data S



grid_value	coord_x	coord_y

Why use a standard?

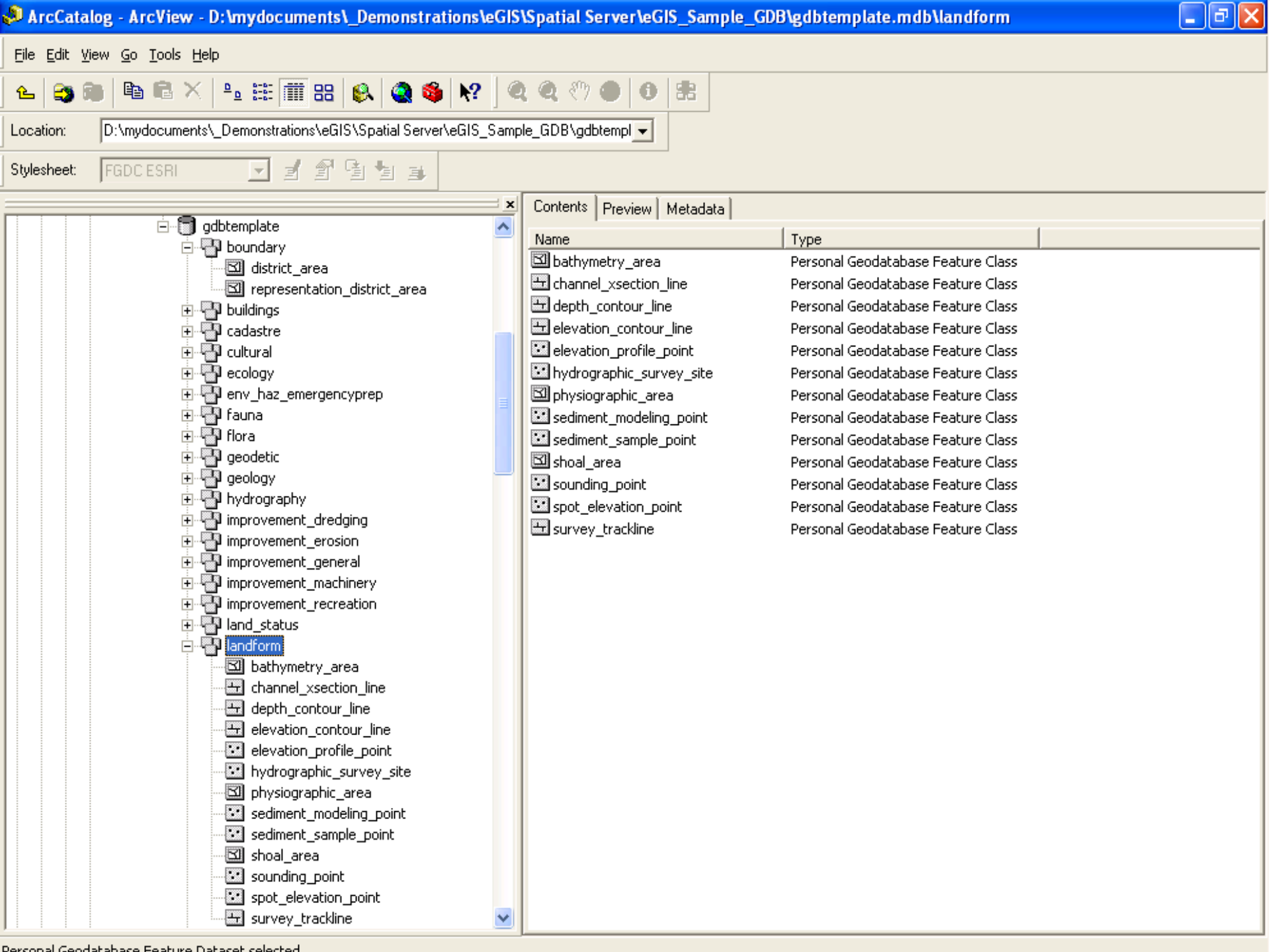
- Think for a moment how hard it would be to…
  - Bake a cake without standard units of measurement
  - Put gas into your car without standard nozzle sizes
  - Plug a lamp into a socket without standard electrical outlets
- Spatial Data Standards ensure a level of consistency for data collection, storage, and distribution.

Acquiring New SDS Datasets

- When writing new scopes of work to acquire additional datasets, a line item should be placed to make reference to the spatial data deliverables. All deliverables need a formatting requirement defined, so why not ask for exactly what you need? In most cases, the contract will not increase in cost to have your data delivered in a GIS-ready format.
- **Sample Contract Language**
  - All mapping and GIS work performed as part of this contract will conform to the following standards for accuracy, content, and structure: All large-scale mapping projects (scales larger than 1 inch (in.) = 1,667 feet (ft.)), shall follow the Government Standards (Army, Navy, Air Force) and/or "ASPRS Accuracy Standards for Large Scale Maps" (ASPRS 1990) classification standard. Small-scale mapping (scales smaller than 1:24,000) projects will follow the OMB "United States National Map Accuracy Standards" (Bureau of the Budget 1947). All spatial data generated as part of this contract will conform to the most current release of the TSSDS. The contractor shall submit a written request for approval of any deviations from the Government's established standards. No deviations from the Government's established standards will be permitted unless prior written approval of such deviation has been issued by the Government Contracting Officer.

SDS Compliance Difficulty?

- Good news is, is that is not difficult, but it is tedious.
- A template geodatabase has been created to take a lot of the pain out of interpreting the Spatial Data Standard.
- The tedious part is converting non-compliant dataset by loading them into the template.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boundary
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fauna
flora
geodetic
geology
hydrography
improvement_dredging
improvement_erosion
improvement_general
improvement_machinery
improvement_recreation
land_status
landform
bathymetry_area
channel_xsection_line
depth_contour_line
elevation_contour_line
elevation_profile_point
hydrographic_survey_site
physiographic_area
sediment_modeling_point
sediment_sample_point
shoal_area
sounding_point
spot_elevation_point
survey_trackline
Contents Preview Metadata
Name Type
bathymetry_area Personal Geodatabase Feature Class
channel_xsection_line Personal Geodatabase Feature Class
depth_contour_line Personal Geodatabase Feature Class
elevation_contour_line Personal Geodatabase Feature Class
elevation_profile_point Personal Geodatabase Feature Class
hydrographic_survey_site Personal Geodatabase Feature Class
physiographic_area Personal Geodatabase Feature Class
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sediment_sample_point Personal Geodatabase Feature Class
shoal_area Personal Geodatabase Feature Class
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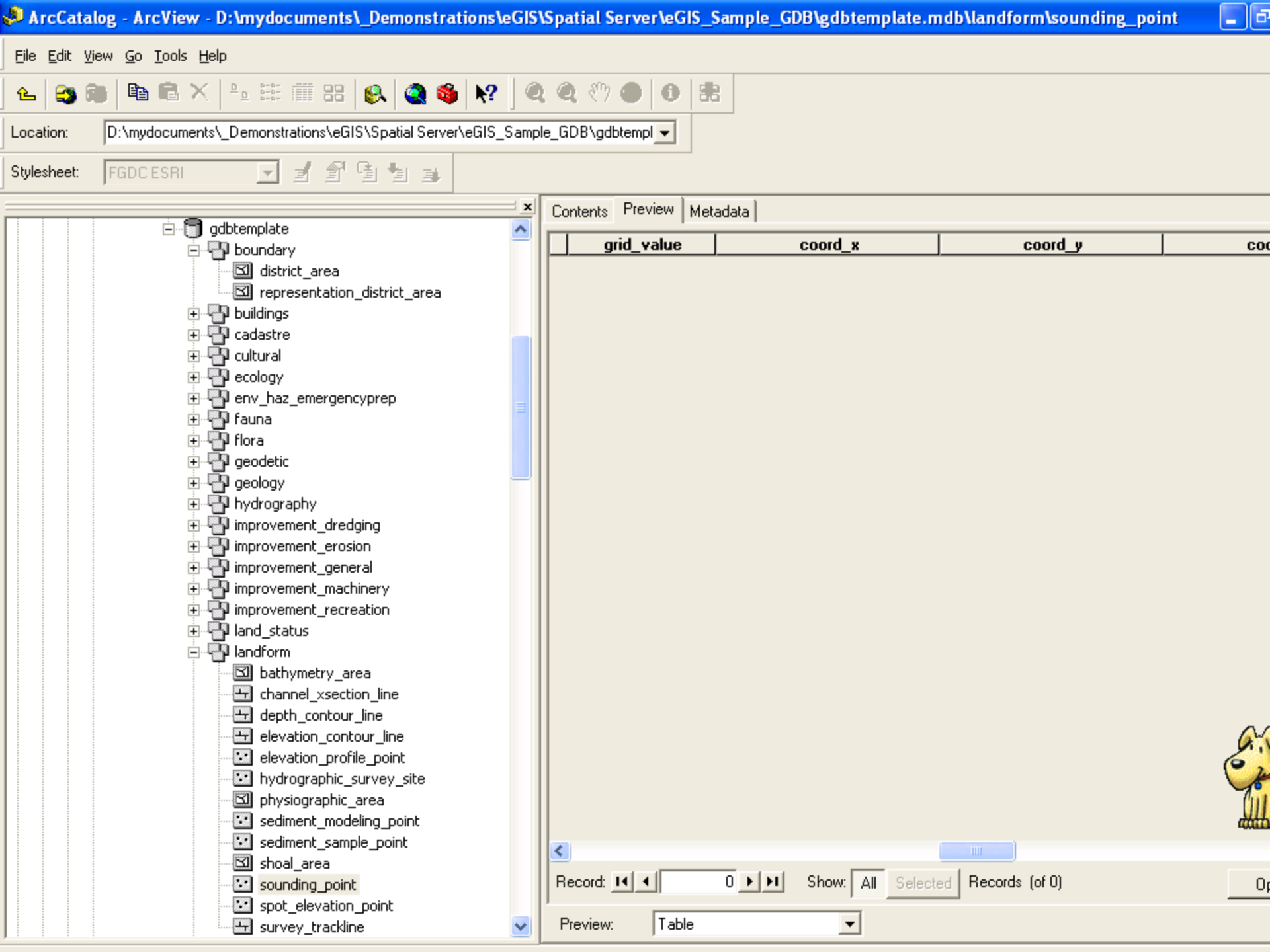
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Stylesheet: FGDC ESRI
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representation_district_area
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improvement_general
improvement_machinery
improvement_recreation
land_status
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bathymetry_area
channel_xsection_line
depth_contour_line
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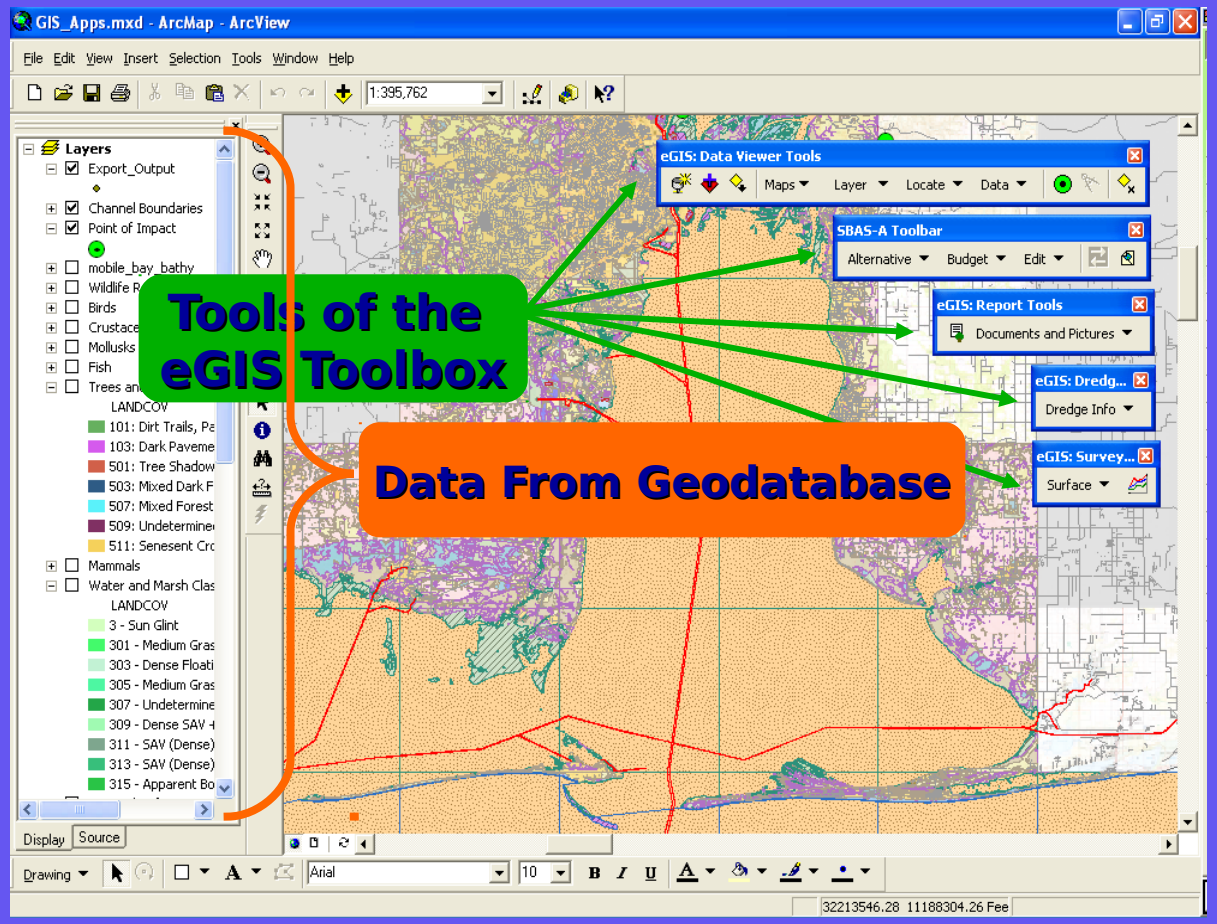
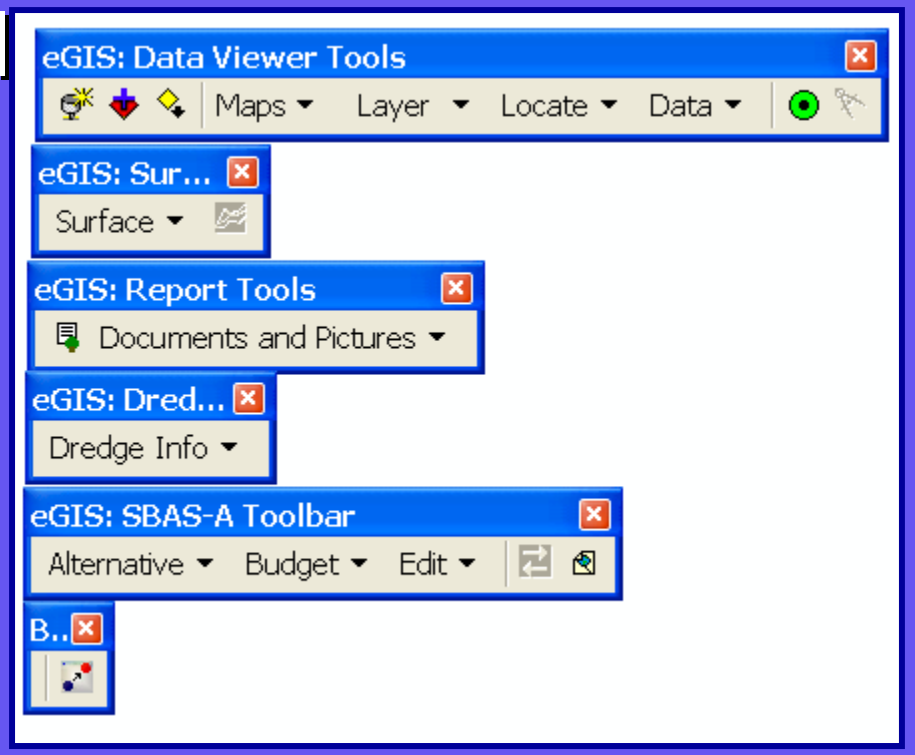
elevation_profile_point
hydrographic_survey_site
physiographic_area
sediment_modeling_point
sediment_sample_point
shoal_area
sounding_point
spot_elevation_point
survey_trackline
Contents Preview Metadata
grid_value coord_x coord_y
Record: 0 Show: All Selected Records (of 0)
Preview: Table

The eGIS Interface: Desktop

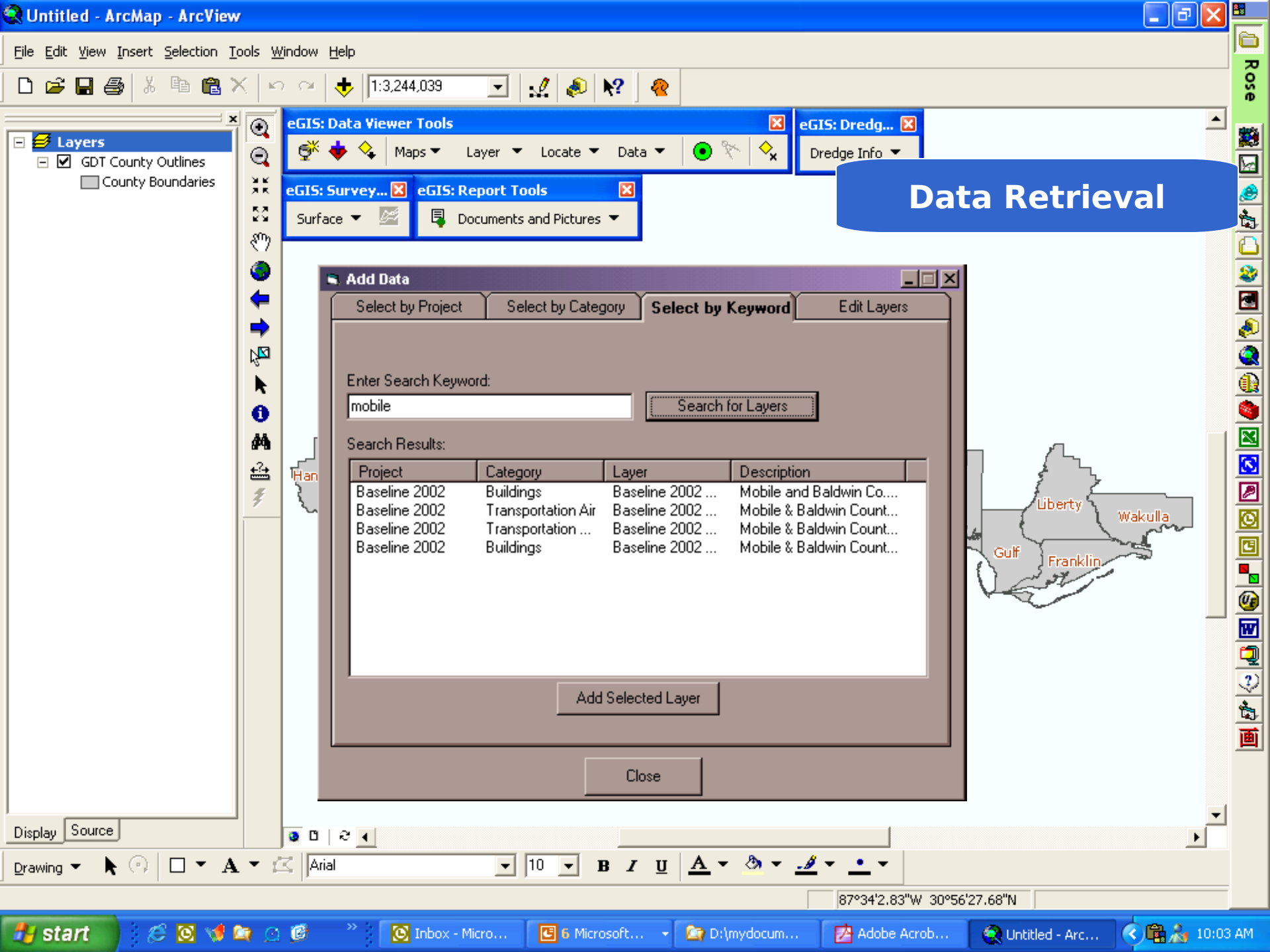


eGIS Toolbox

- Data Viewer Tool
- Surface Tools*
- Report Tools
- Dredge Tools*
- SBAS-A Tools*
- Profile Tool*



*Designed specifically for the eCoastal environment


Untitled - ArcMap - ArcView
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Layers
GDT County Outlines
County Boundaries
Display Source
eGIS: Data Viewer Tools
Maps Layer Locate Data
eGIS: Dredg...
Dredge Info
eGIS: Survey...
Surface
eGIS: Report Tools
Documents and Pictures
Data Retrieval
Add Data
Select by Project
Select by Category
Select by Keyword
Edit Layers
Enter Search Keyword:
mobile
Search for Layers
Search Results:
Project Category Layer Description
Baseline 2002 Buildings Baseline 2002 ... Mobile and Baldwin Co....
Baseline 2002 Transportation Air Baseline 2002 ... Mobile & Baldwin Count...
Baseline 2002 Transportation ... Baseline 2002 ... Mobile & Baldwin Count...
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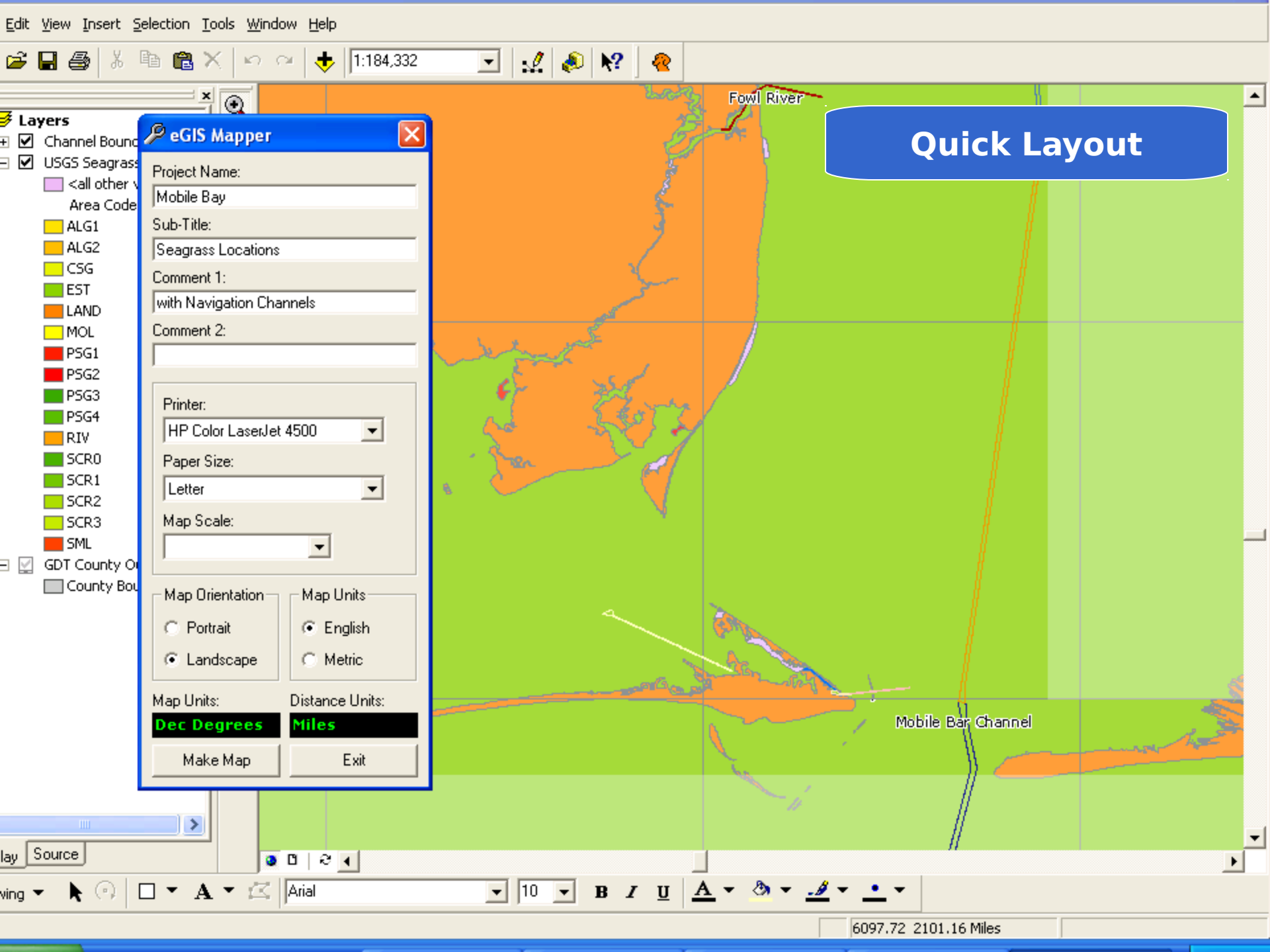
Edit View Insert Selection Tools Window Help
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eGIS Mapper
Project Name:
Mobile Bay
Sub-Title:
Seagrass Locations
Comment 1:
with Navigation Channels
Comment 2:
Printer:
HP Color LaserJet 4500
Paper Size:
Letter
Map Scale:
Map Orientation
Portrait
Landscape
Map Units
English
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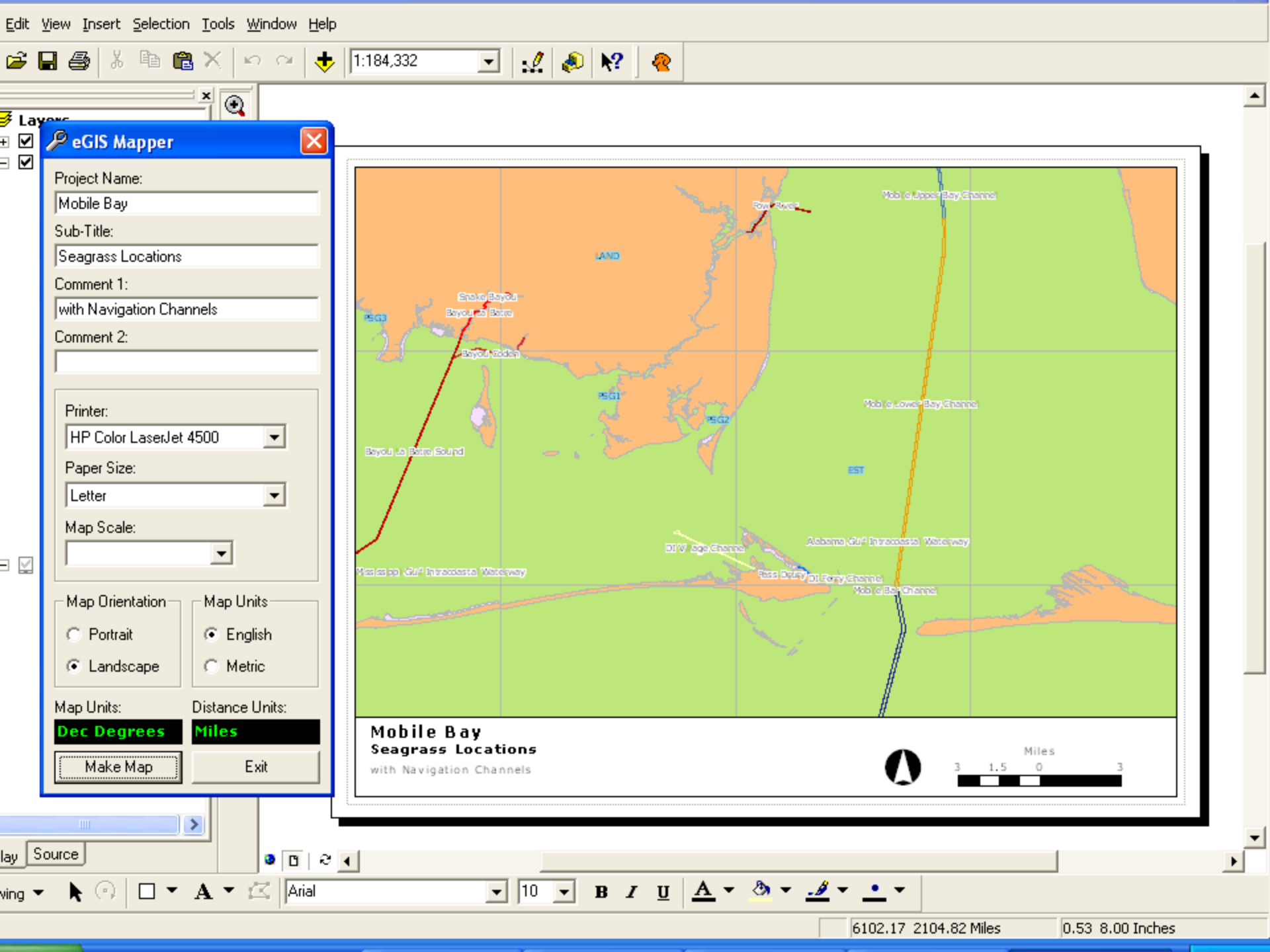
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eGIS Mapper
Project Name:
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Sub-Title:
Seagrass Locations
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Printer:
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Paper Size:
Letter
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Map Orientation
Portrait
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Map Units
English
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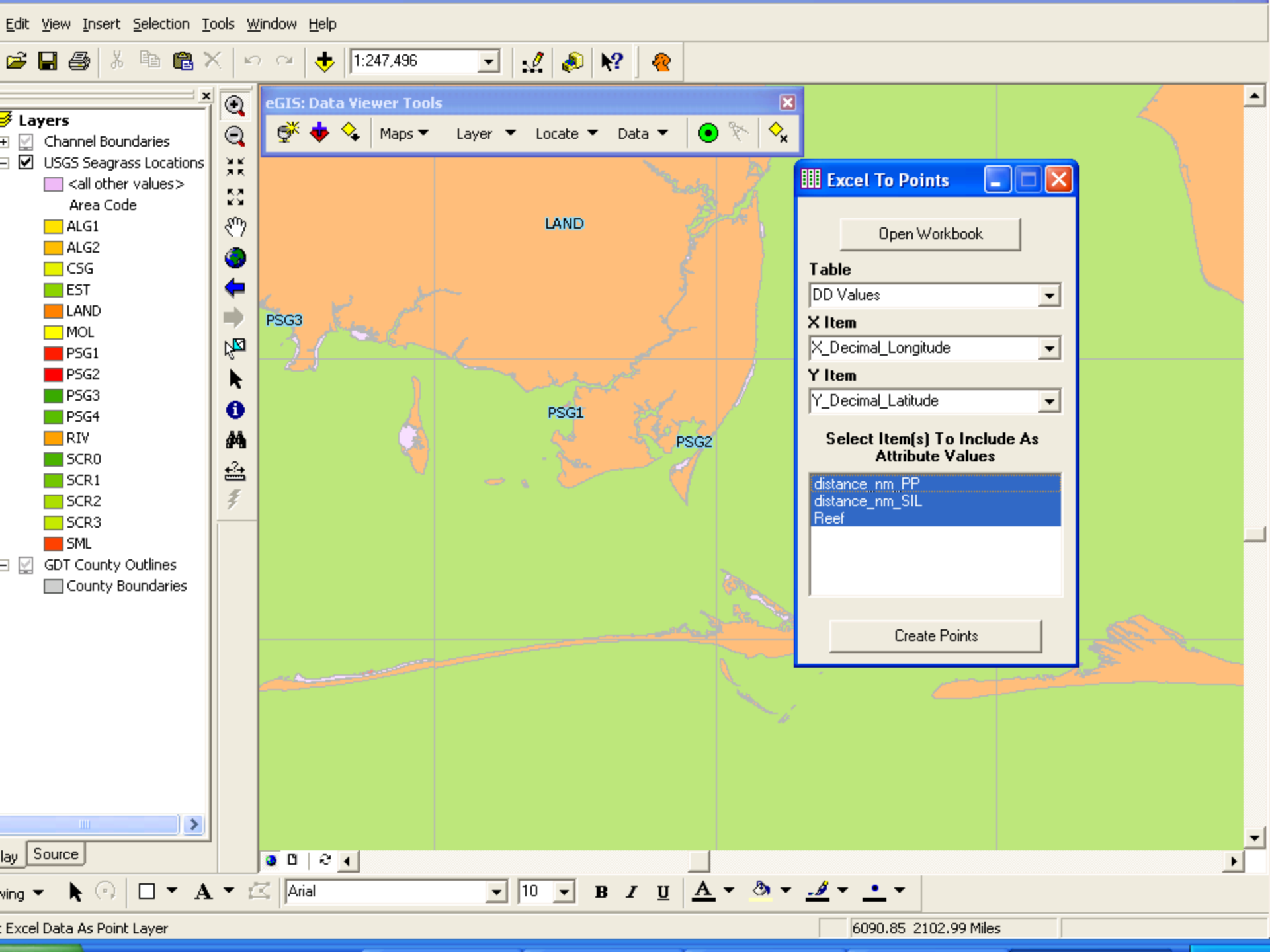
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Layers
Channel Boundaries
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ALG1
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GDT County Outlines
County Boundaries
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eGIS: Data Viewer Tools
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Excel To Points
Open Workbook
Table
DD Values
X Item
X_Decimal_Longitude
Y Item
Y_Decimal_Latitude
Select Item(s) To Include As Attribute Values
distance_nm_PP
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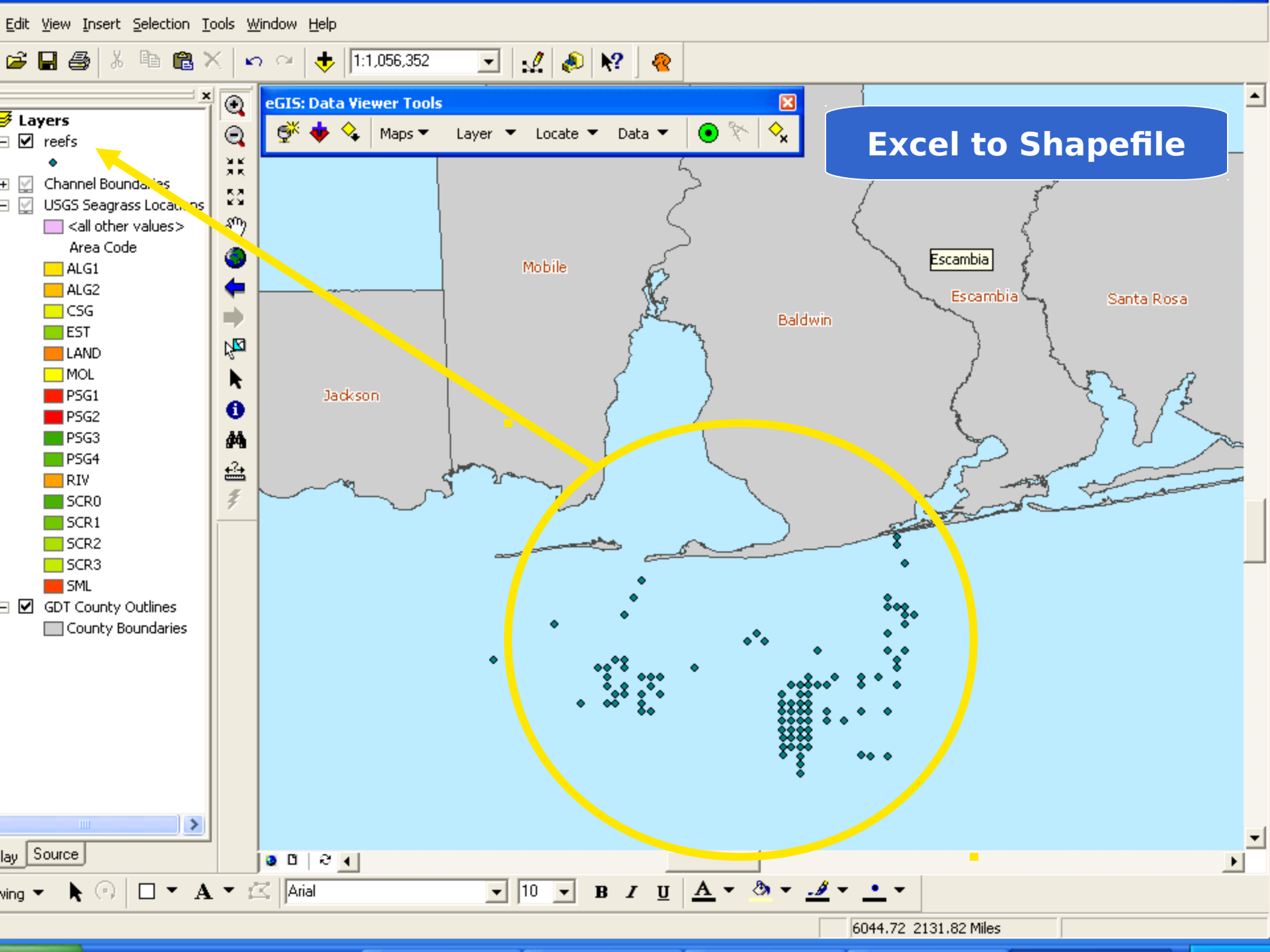
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eGIS: Data Viewer Tools
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SCR3
SML
GDT County Outlines
County Boundaries
Source
Mobile
Escambia
Escambia
Santa Rosa
Baldwin
Jackson
Arial
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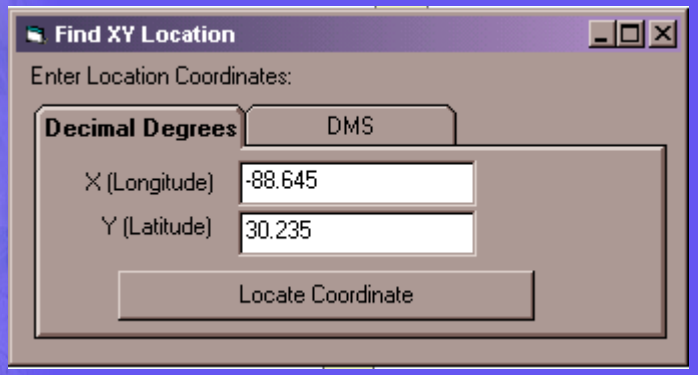
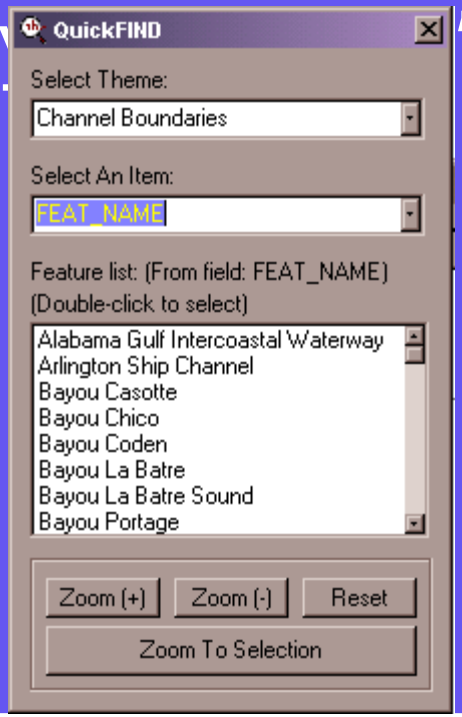
6044.72 2131.82 Miles

Data Viewer – in Search of …

- Users can Search by XY Location
- Quick attribute queries can be created with “Find b…”





Enterprise GIS: Coastal Focus

- Custom SDS-compliant geodatabases have been created using the standard.
- Each of these databases are developed with a specific focus, such as Coastal Data.
  - The SDS was filtered to find all coastal related datasets.
  - These datasets were imported into a geodatabase template.

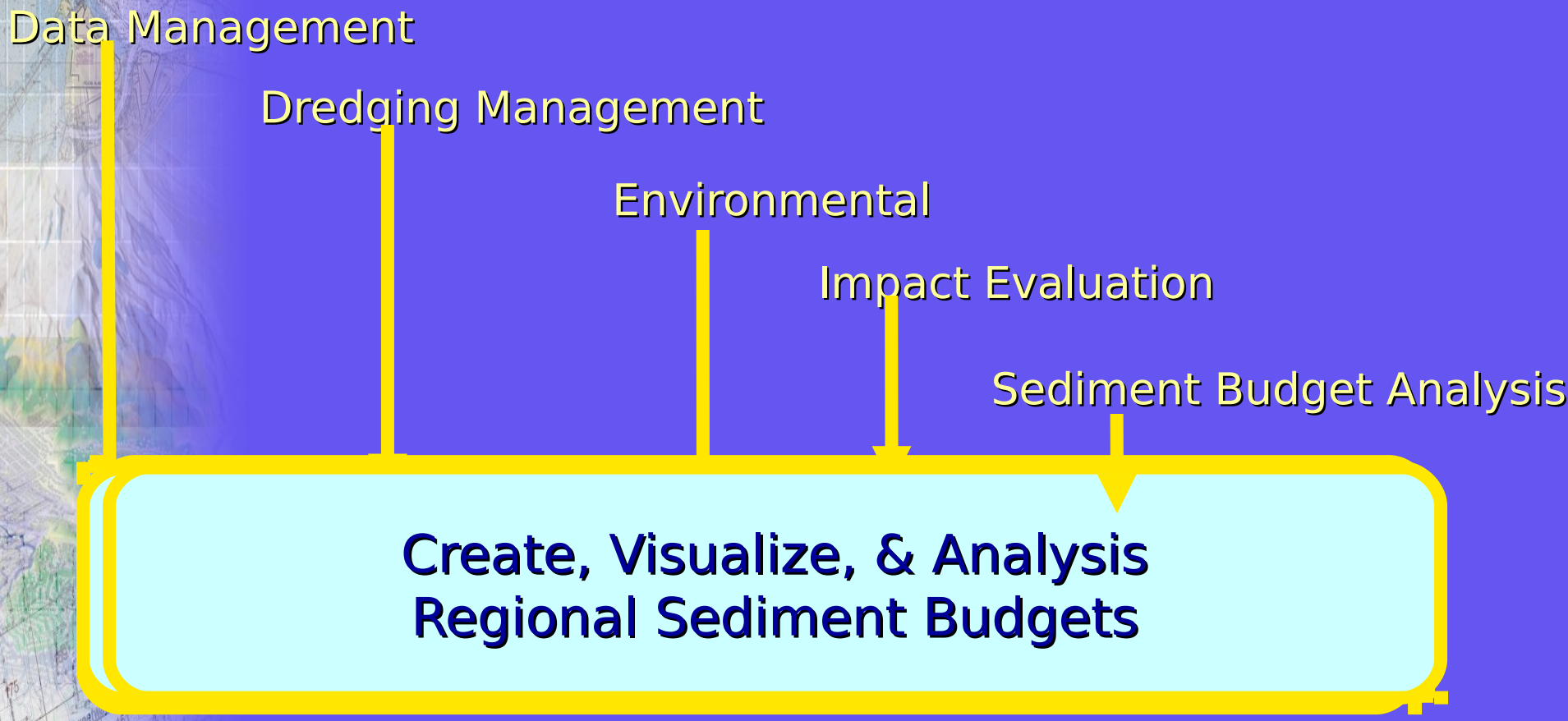
What is eCoastal?

- eCoastal is an **enterprise GIS** developed for coastal engineering business practices. It was developed to concentrate on the specific needs of the coastal engineer.

- eCoastal is an **architecture** developed by the U.S. Army Corps of Engineers that addresses spatial data standards (SDS), geodatabase development, and desktop and web applications. It was designed as data management solution to provide baseline information for effective planning and prediction of regional and local coastal processes.

- This architecture allows adjacent coastal projects to effectively share and access data contained in the system.

eCoastal System



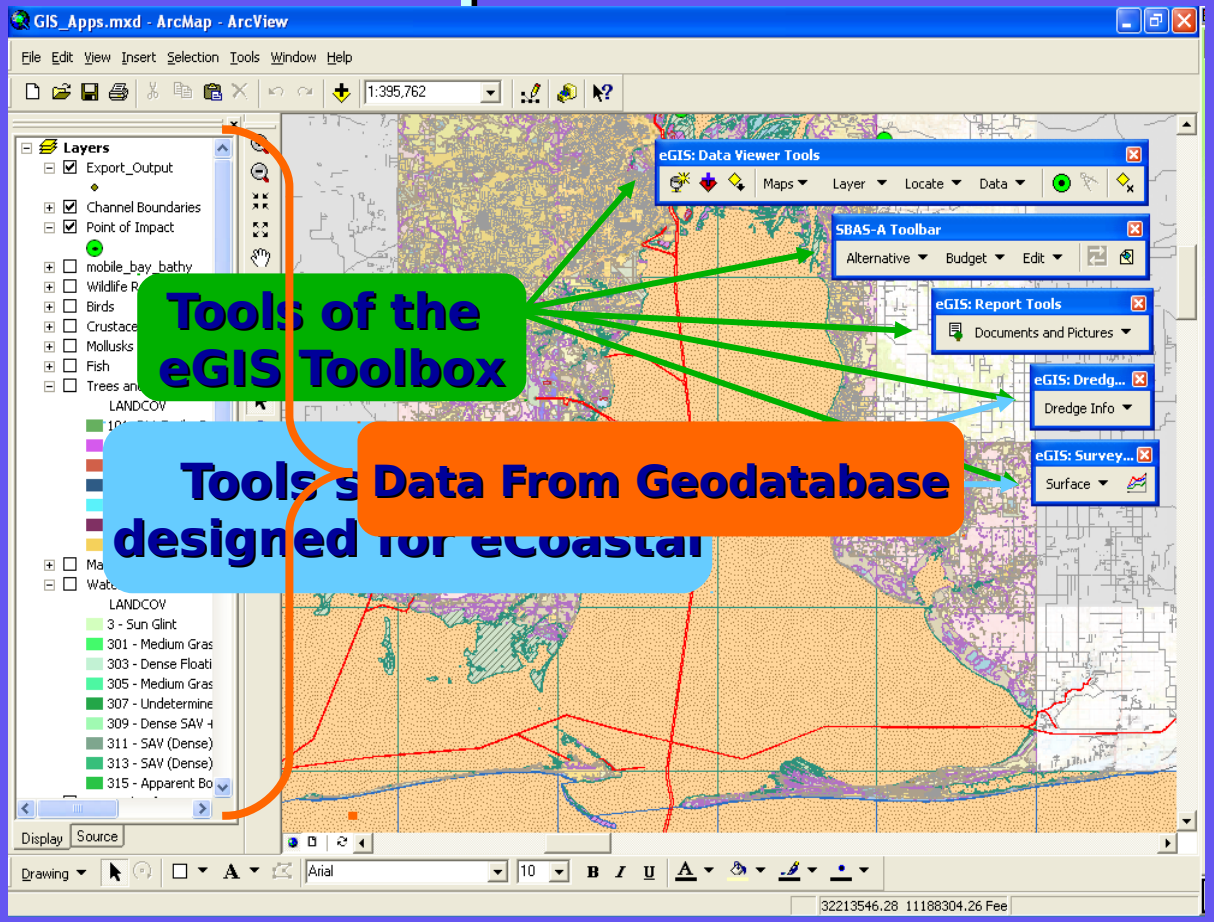
Who Uses eCoastal?

- ANY user interested in coastal related datasets.
  - The eCoastal database is enabled to store coastal engineering specific datasets (sediment transport rates, littoral zones, shoreline change rates, etc) AND basemap data along the coastal zone (roads, schools, buildings, cities, etc.)
- GIS technology allows all users access to the data
  - ArcIMS requires only an internet connection to view mapping data.
  - Users with more advanced needs, can use ArcMap to connect and analyze the data stored in the geodatabase.

The eCoastal Interface: Desktop

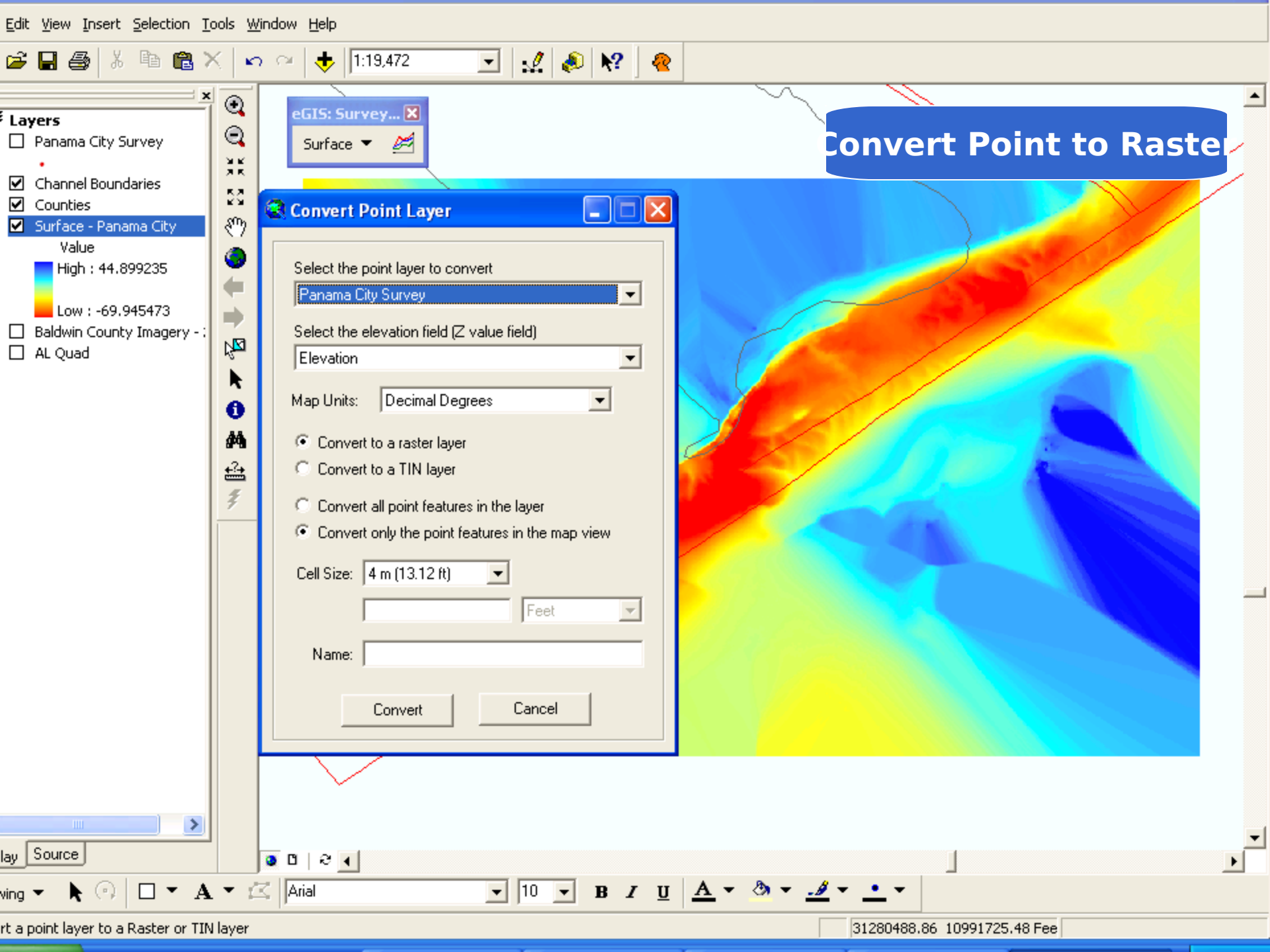
Custom applications were built for the Coastal Engineer to standardize the data processing and analysis procedures.

Toolbox is assembled based on user needs.



Survey Tools

- Users have the ability to generate user-defined grid surfaces and TINs.
- View the data in 3D
- Cut Cross-Section Profiles through the data
- Calculate the Depth Differences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Layers
Panama City Survey
Channel Boundaries
Counties
Surface - Panama City
Value
High : 44.899235
Low : -69.945473
Baldwin County Imagery -
AL Quad
Source
eGIS: Survey...
Surface
Convert Point to Raster
Convert Point Layer
Select the point layer to convert
Panama City Survey
Select the elevation field (Z value field)
Elevation
Map Units:
Decimal Degrees
Convert to a raster layer
Convert to a TIN layer
Convert all point features in the layer
Convert only the point features in the map view
Cell Size:
4 m (13.12 ft)
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Convert
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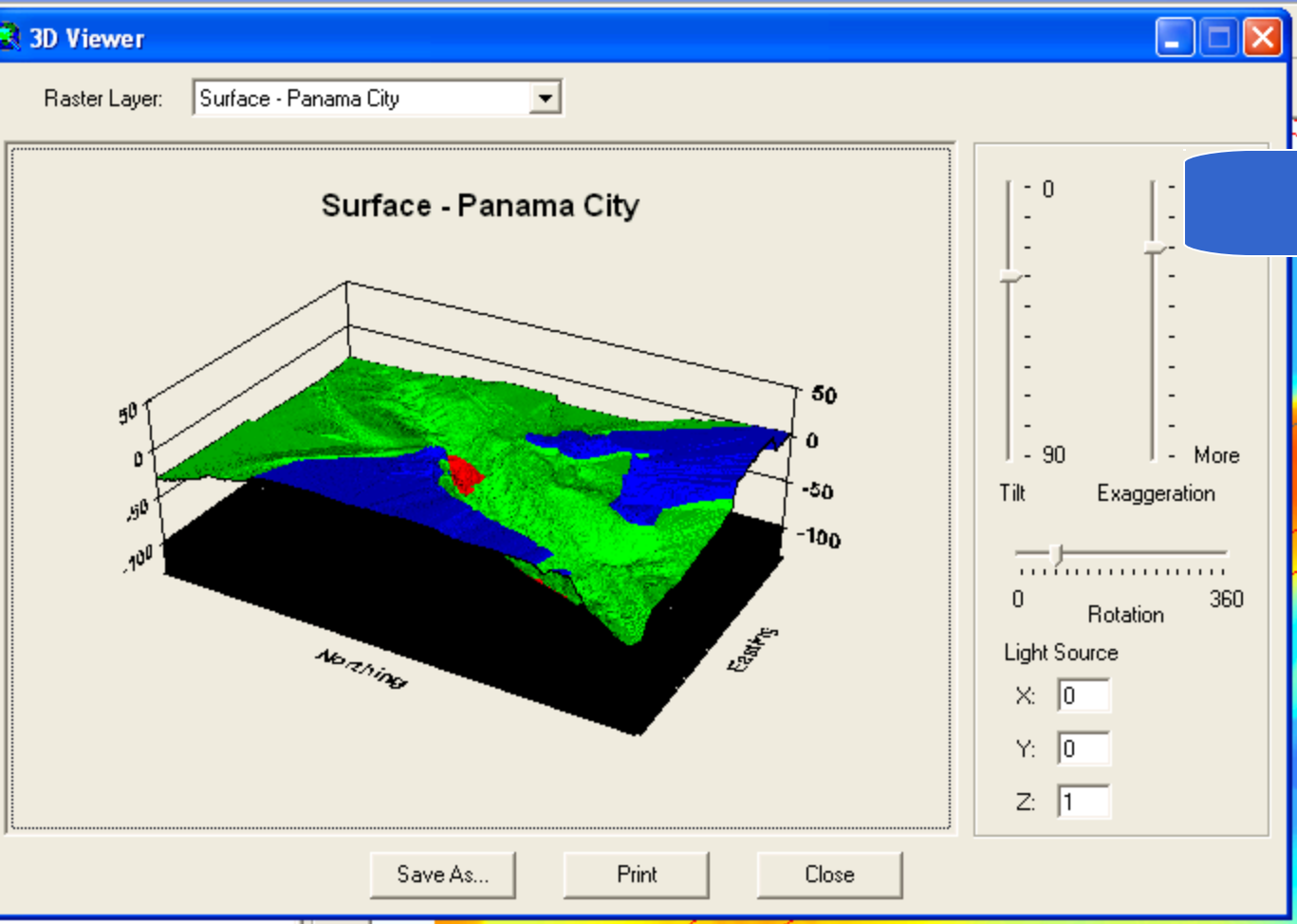
Raster in 3D


3D Viewer
Raster Layer:
Surface - Panama City
Surface - Panama City
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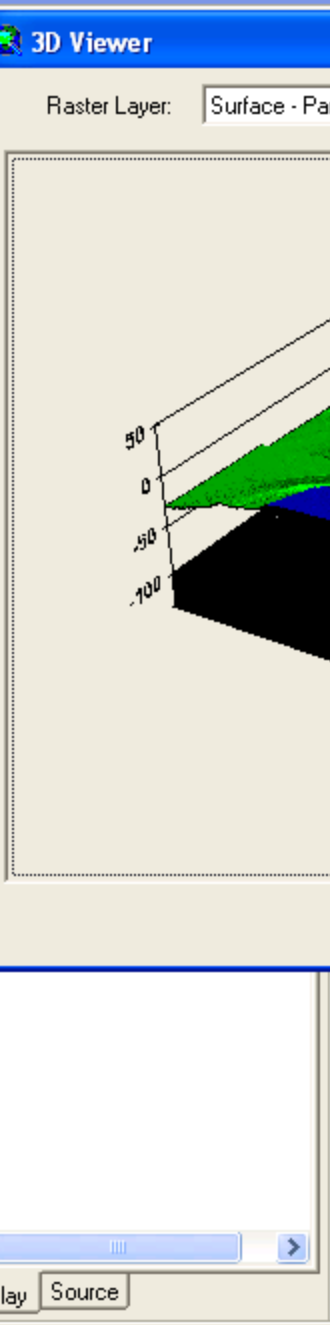
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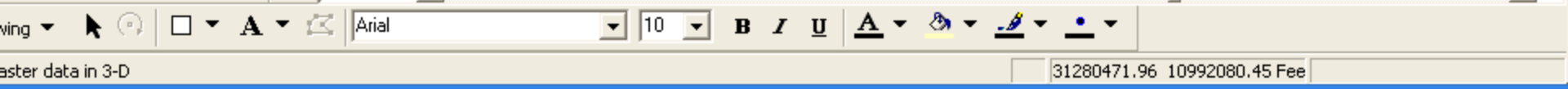
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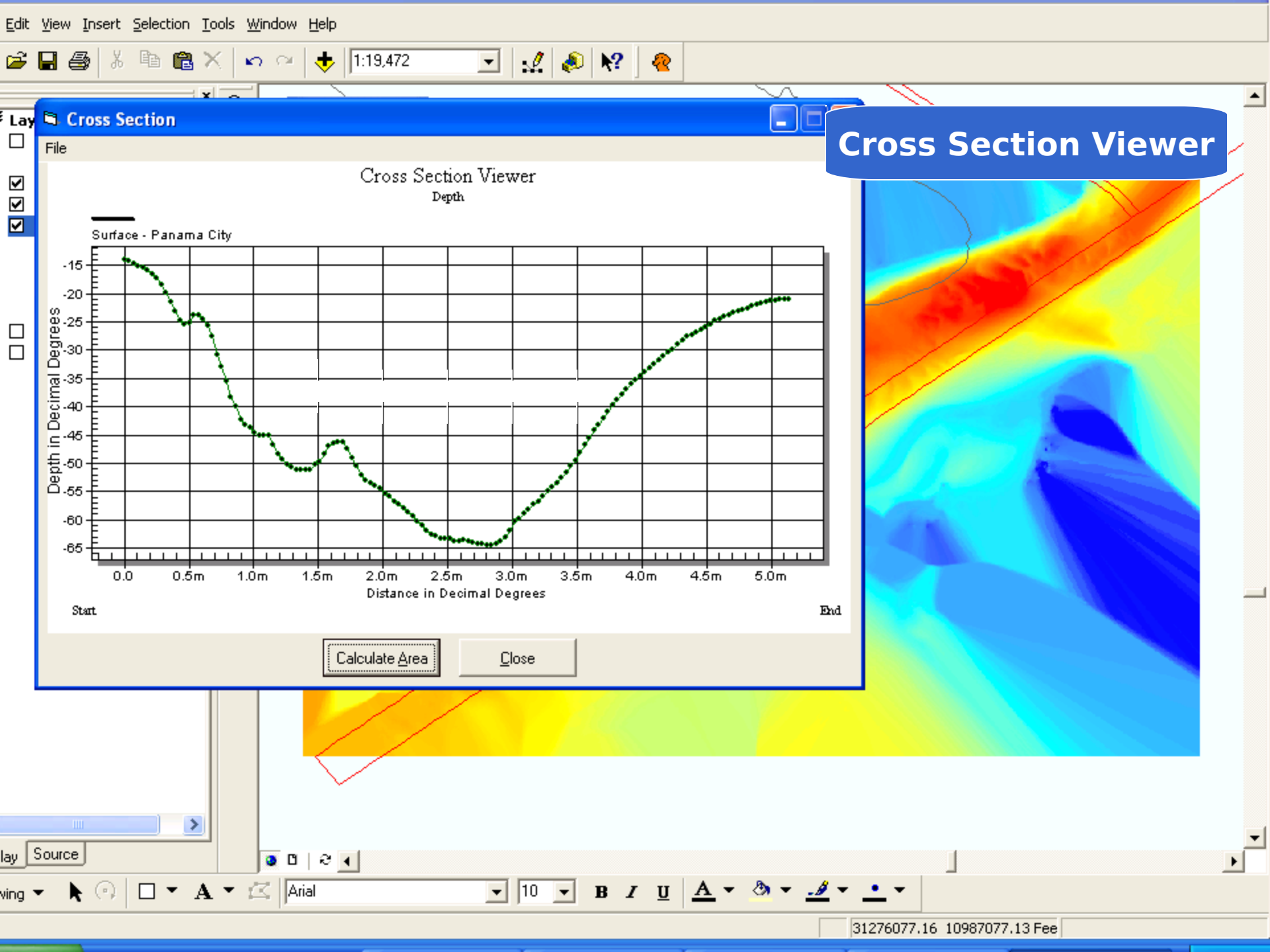
Edit View Insert Selection Tools Window Help
1:19,472
Cross Section
File
Cross Section Viewer
Depth
Surface - Panama City
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-25
-30
-35
-40
-45
-50
-55
-60
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Depth in Decimal Degrees
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1.5m
2.0m
2.5m
3.0m
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4.5m
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Distance in Decimal Degrees
Start
End
Calculate Area
Close
Cross Section Viewer
Source
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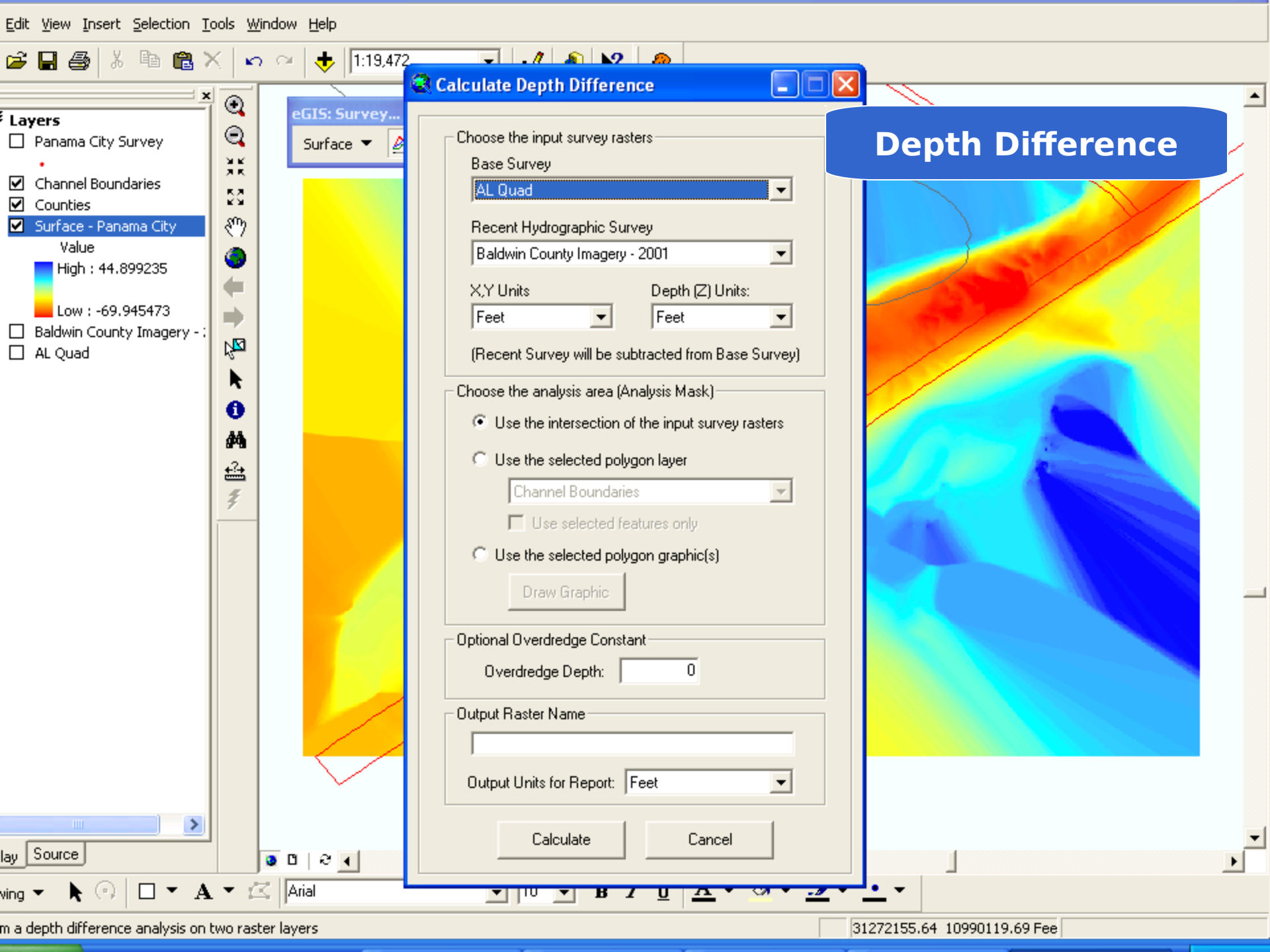
Edit View Insert Selection Tools Window Help
1:19,472
Layers
Panama City Survey
Channel Boundaries
Counties
Surface - Panama City
Value
High : 44.899235
Low : -69.945473
Baldwin County Imagery - :
AL Quad
Source
eGIS: Survey...
Surface
Calculate Depth Difference
Choose the input survey rasters
Base Survey
AL Quad
Recent Hydrographic Survey
Baldwin County Imagery - 2001
X,Y Units
Feet
Depth (Z) Units:
Feet
(Recent Survey will be subtracted from Base Survey)
Choose the analysis area (Analysis Mask)
Use the intersection of the input survey rasters
Use the selected polygon layer
Channel Boundaries
Use selected features only
Use the selected polygon graphic(s)
Draw Graphic
Optional Overdredge Constant
Overdredge Depth:
0
Output Raster Name
Output Units for Report:
Feet
Calculate
Cancel
Depth Difference
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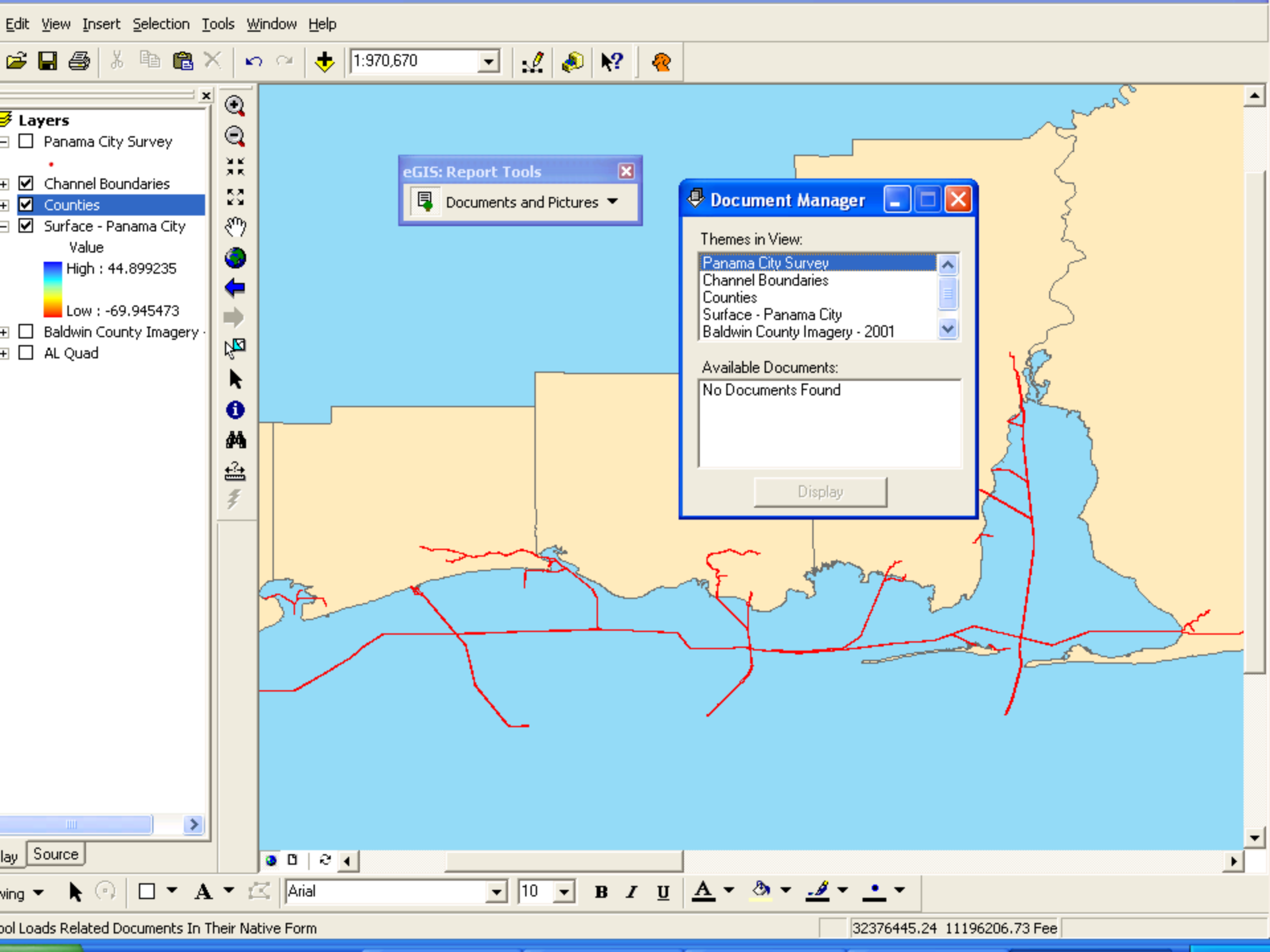
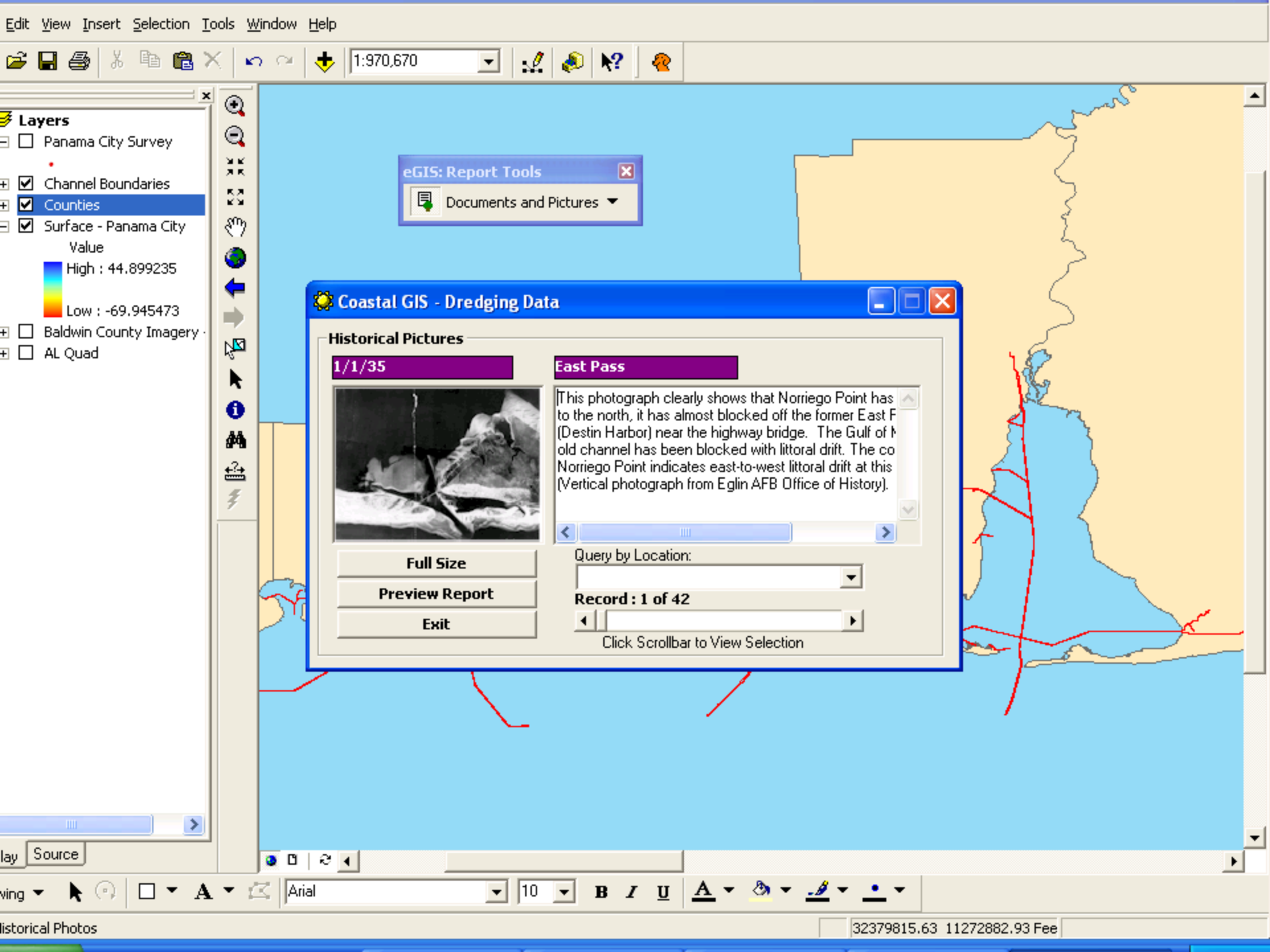
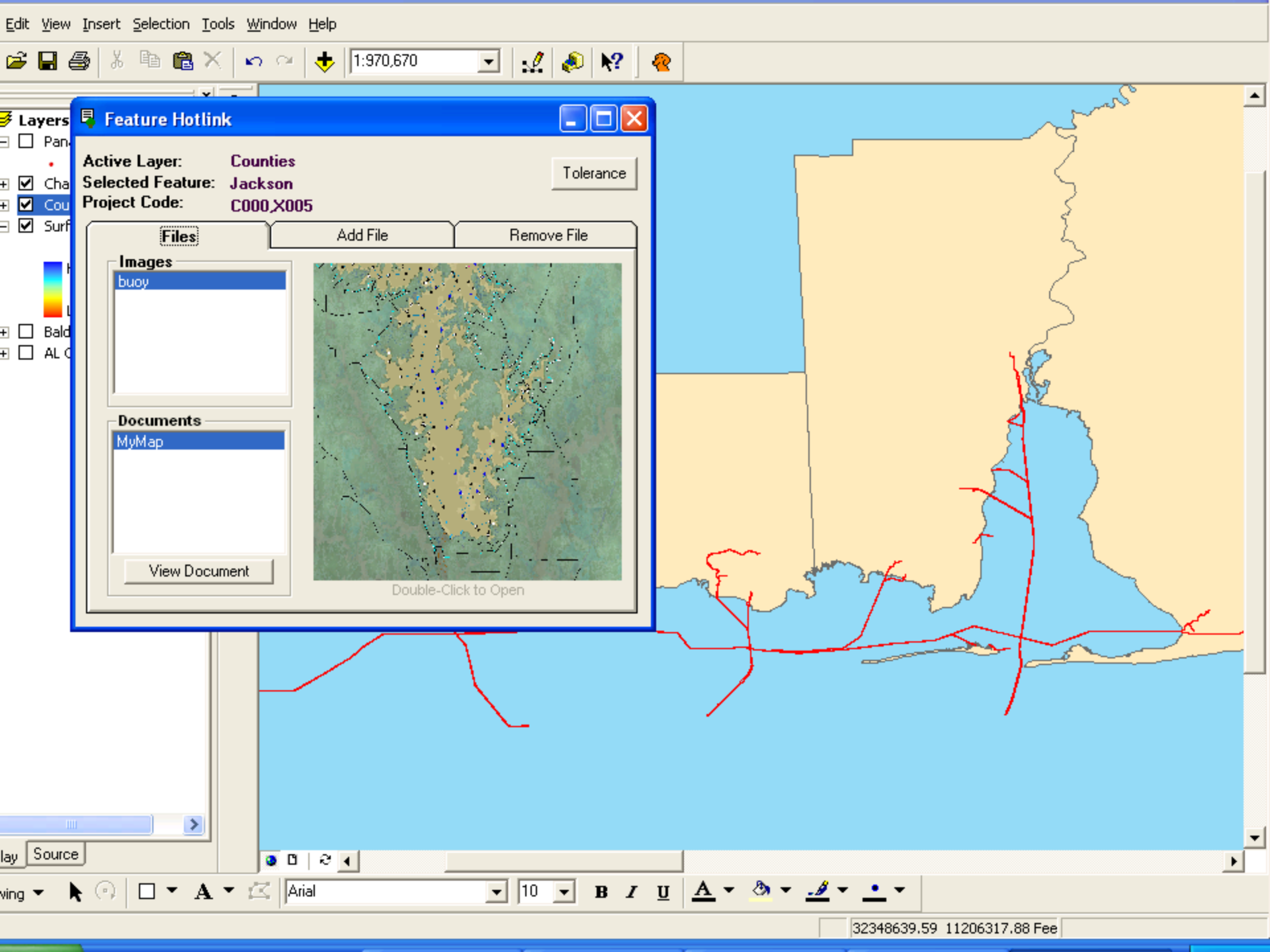
m a depth difference analysis on two raster layers
31272155.64 10990119.69 Fee

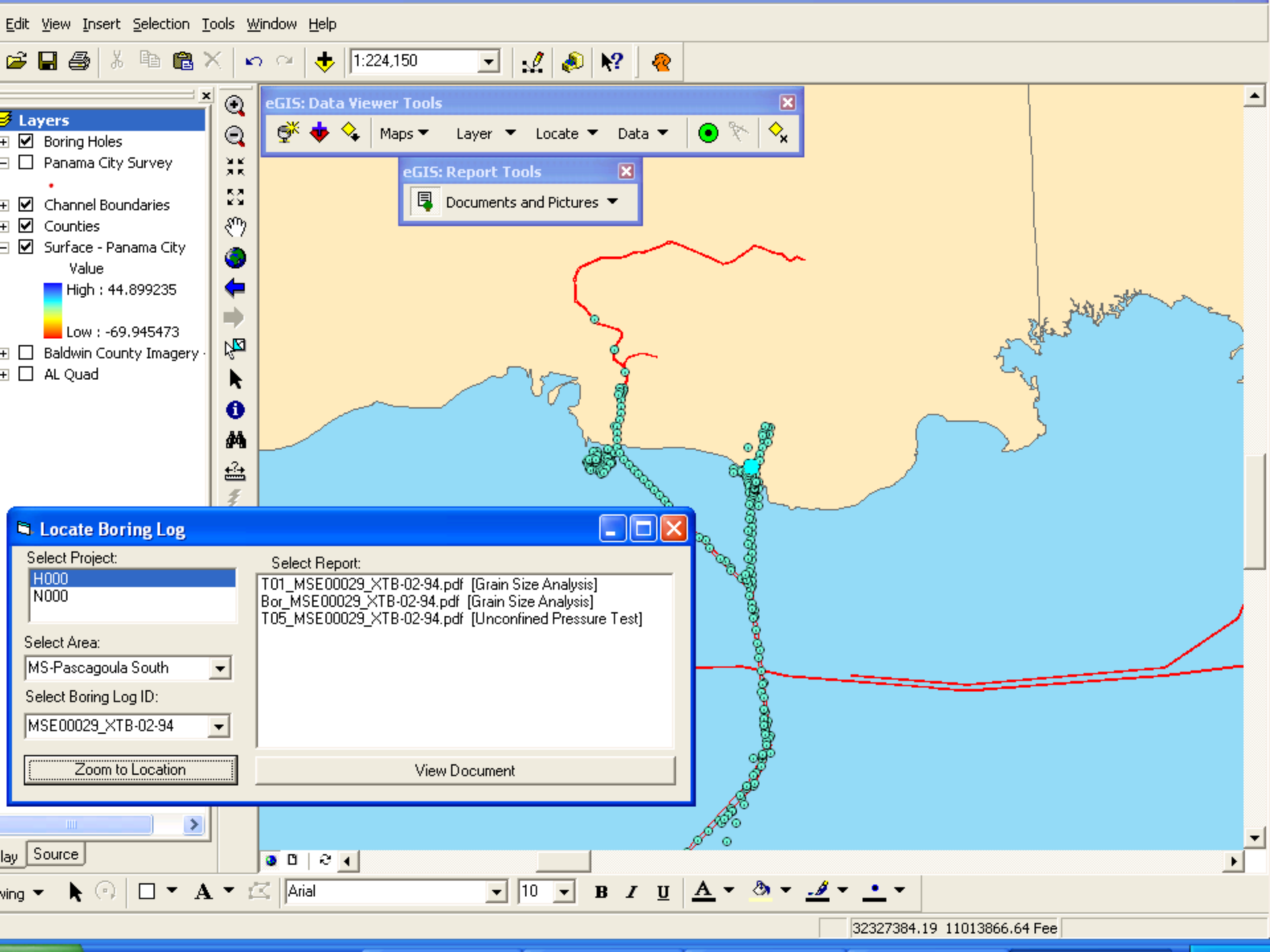
Report Tools

- Document Manager
  - Documents can be referenced to various feature layers inside the GIS.
  - Only one application needs to be open, to access all related documents.
- Historical Photos
  - Users can use archived digital information and view information inside the GIS.


Edit View Insert Selection Tools Window Help
1:970,670
Layers
Panama City Survey
Channel Boundaries
Counties
Surface - Panama City
Value
High : 44.899235
Low : -69.945473
Baldwin County Imagery
AL Quad
Source
eGIS: Report Tools
Documents and Pictures
Document Manager
Themes in View:
Panama City Survey
Channel Boundaries
Counties
Surface - Panama City
Baldwin County Imagery - 2001
Available Documents:
No Documents Found
Display
Arial
10
ool Loads Related Documents In Their Native Form
32376445.24 11196206.73 Fee

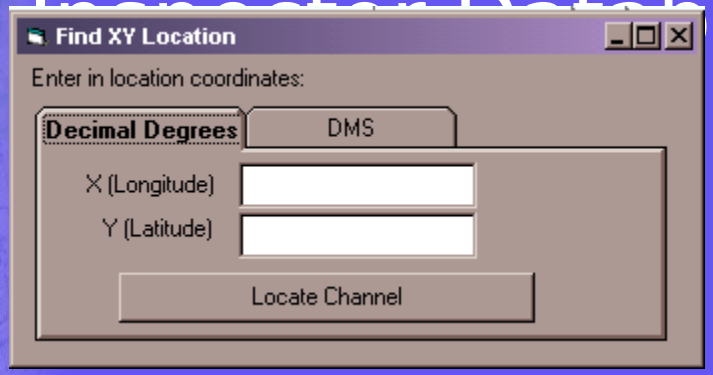

Edit View Insert Selection Tools Window Help
1:970,670
Layers
Panama City Survey
Channel Boundaries
Counties
Surface - Panama City
Value
High : 44.899235
Low : -69.945473
Baldwin County Imagery
AL Quad
Source
eGIS: Report Tools
Documents and Pictures
Coastal GIS - Dredging Data
Historical Pictures
1/1/35
East Pass
This photograph clearly shows that Norriego Point has
to the north, it has almost blocked off the former East F
(Destin Harbor) near the highway bridge. The Gulf of M
old channel has been blocked with littoral drift. The co
Norriego Point indicates east-to-west littoral drift at this
(Vertical photograph from Eglin AFB Office of History).
Full Size
Preview Report
Exit
Query by Location:
Record : 1 of 42
Click Scrollbar to View Selection
Arial
10
Historical Photos
32379815.63 11272882.93 Fee

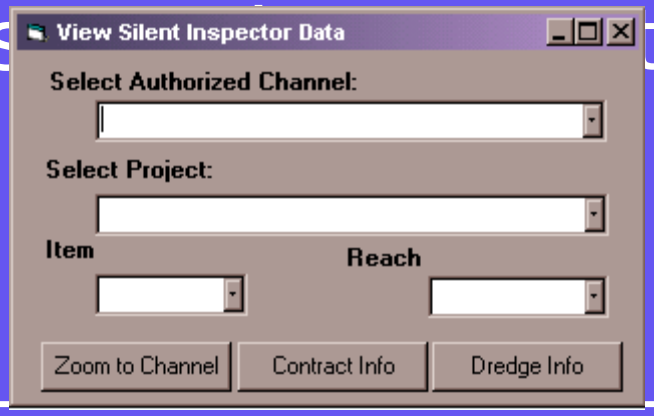

Edit View Insert Selection Tools Window Help
1:970,670
Layers
Feature Hotlink
Active Layer: Counties
Selected Feature: Jackson
Project Code: C000,X005
Tolerance
Files
Add File
Remove File
Images
buoy
Documents
MyMap
View Document
Double-Click to Open
Source
Arial
10
32348639.59 11206317.88 Fee

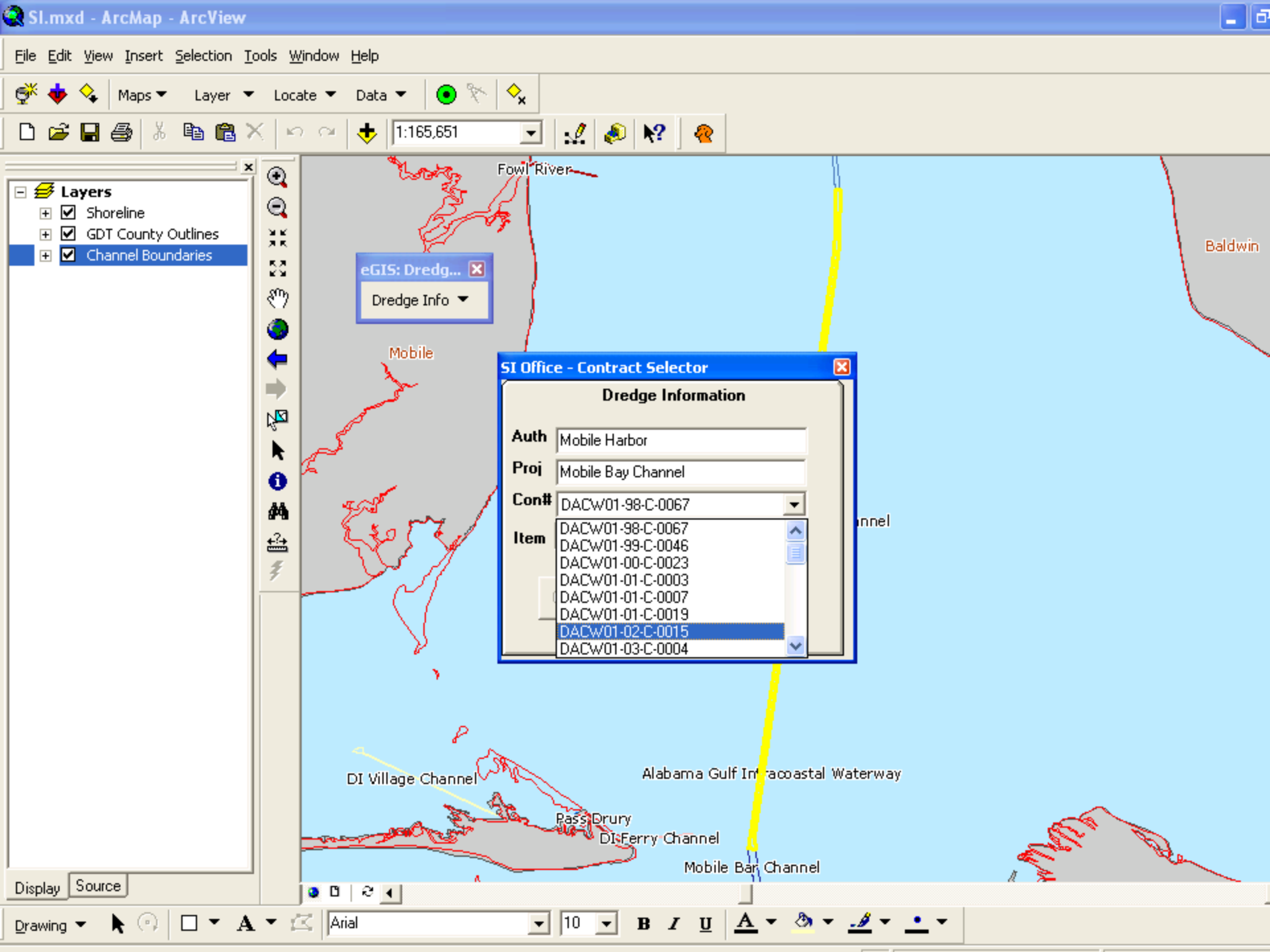

Edit View Insert Selection Tools Window Help
1:224,150
Layers
Boring Holes
Panama City Survey
Channel Boundaries
Counties
Surface - Panama City
Value
High : 44.899235
Low : -69.945473
Baldwin County Imagery
AL Quad
eGIS: Data Viewer Tools
Maps
Layer
Locate
Data
eGIS: Report Tools
Documents and Pictures
Locate Boring Log
Select Project:
H000
N000
Select Area:
MS-Pascagoula South
Select Boring Log ID:
MSE00029_XTB-02-94
Zoom to Location
Select Report:
T01_MSE00029_XTB-02-94.pdf [Grain Size Analysis]
Bor_MSE00029_XTB-02-94.pdf [Grain Size Analysis]
T05_MSE00029_XTB-02-94.pdf [Unconfined Pressure Test]
View Document
Source
Arial
10
32327384.19 11013866.64 Fee

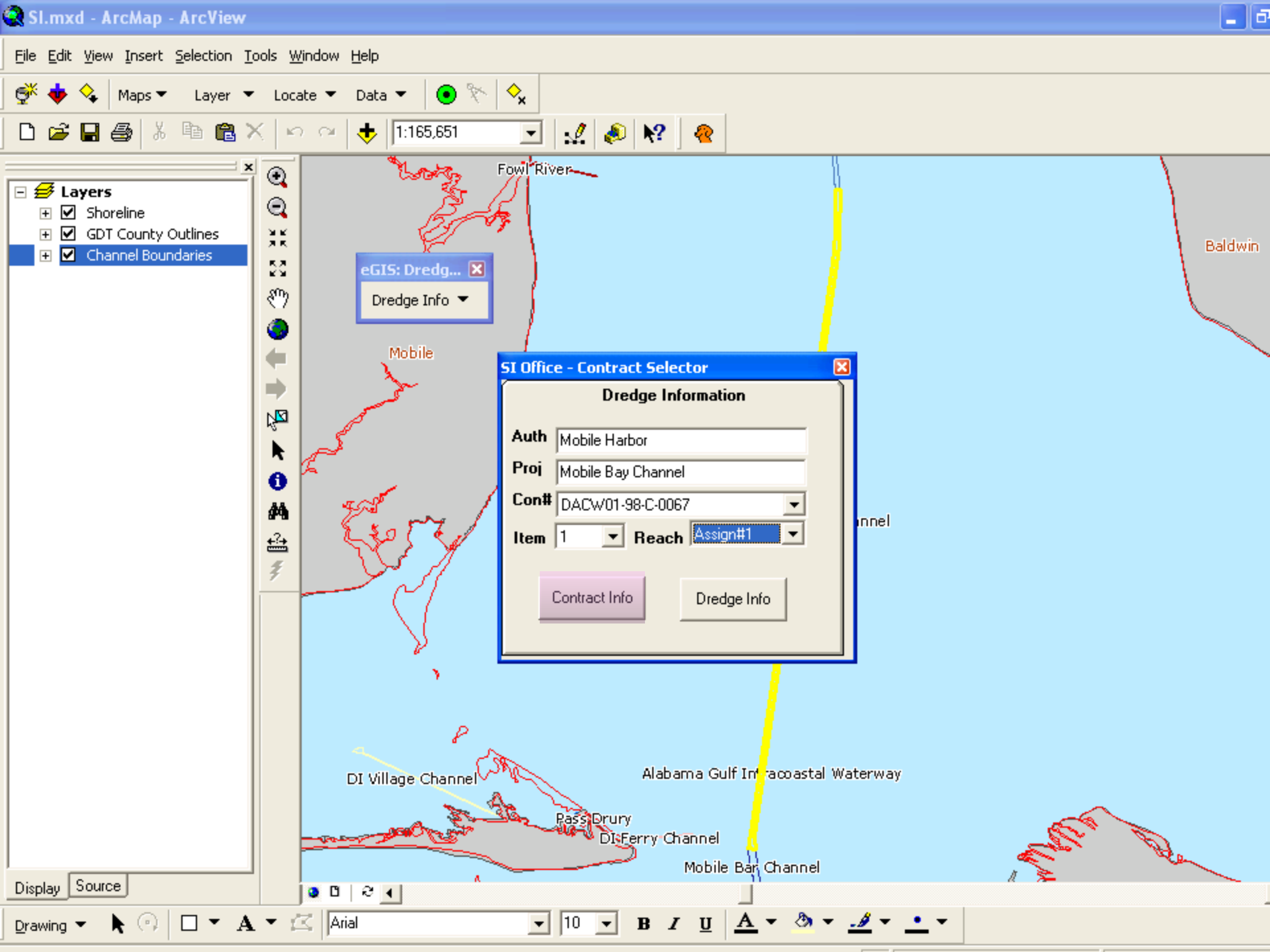
Dredge Tools: Silent Inspector

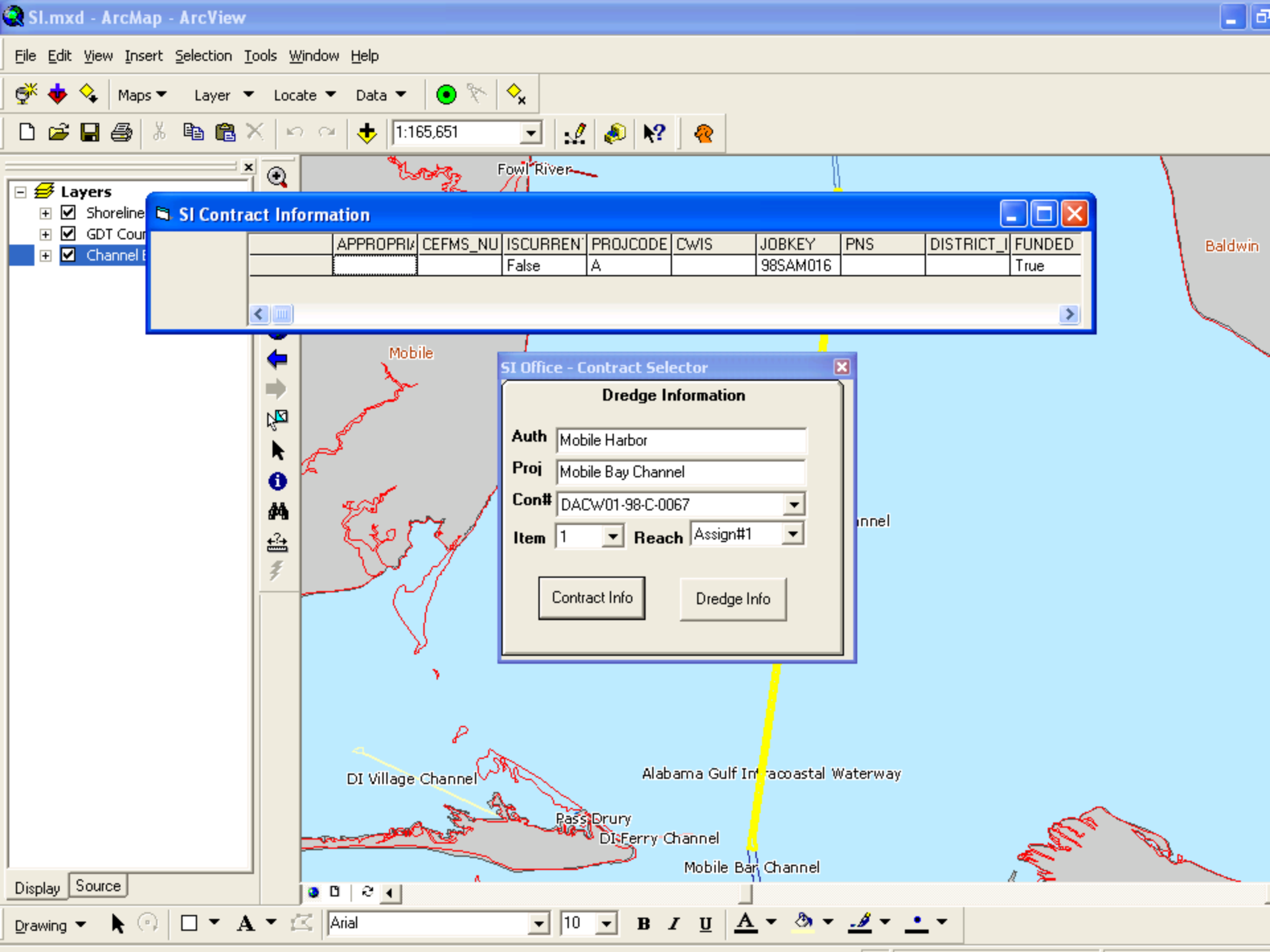
- Users can search the Silent Inspector Database, by location of channel, name of channel or keywords.
- Application queries the Silent Inspector Database and the

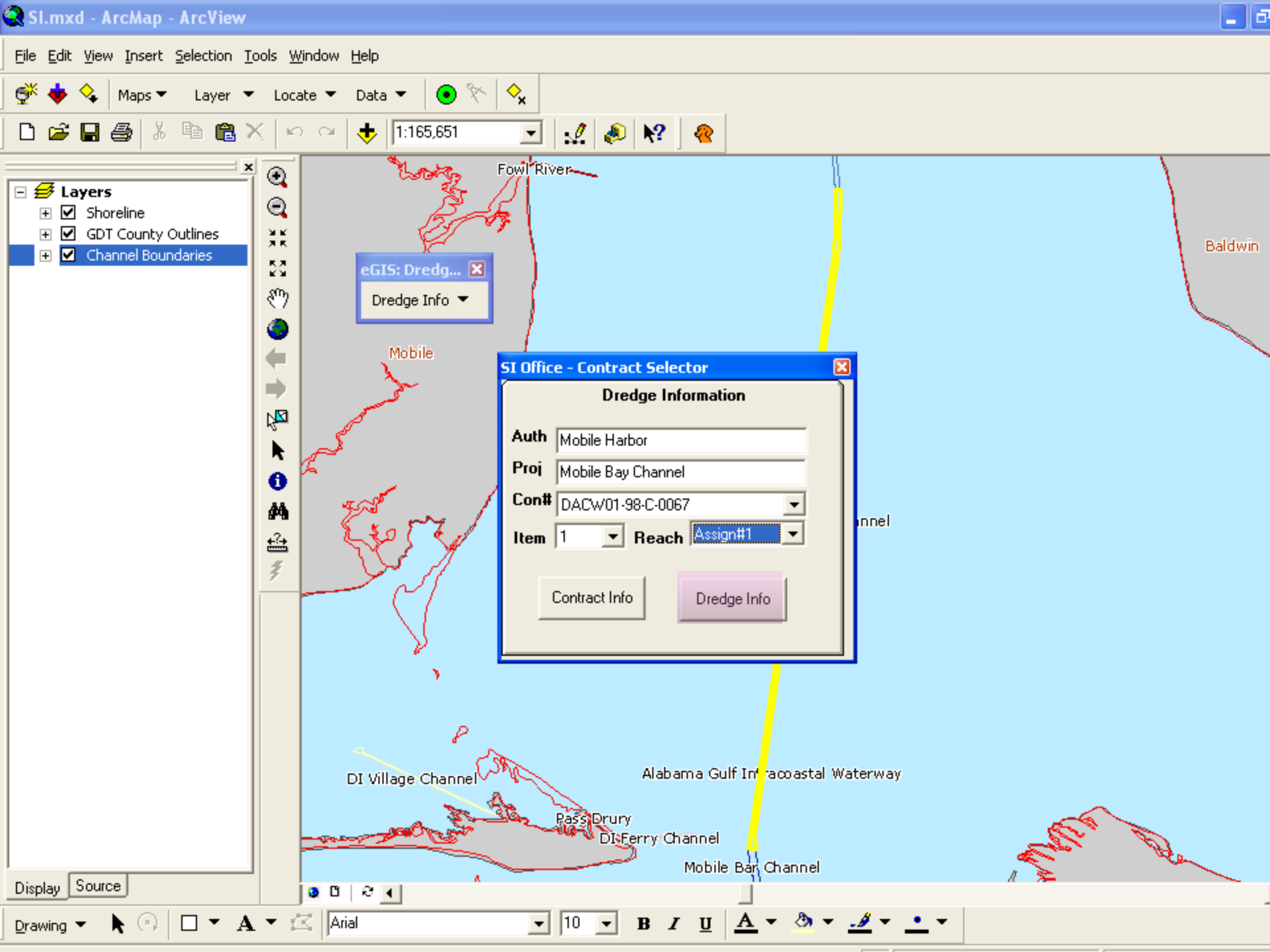


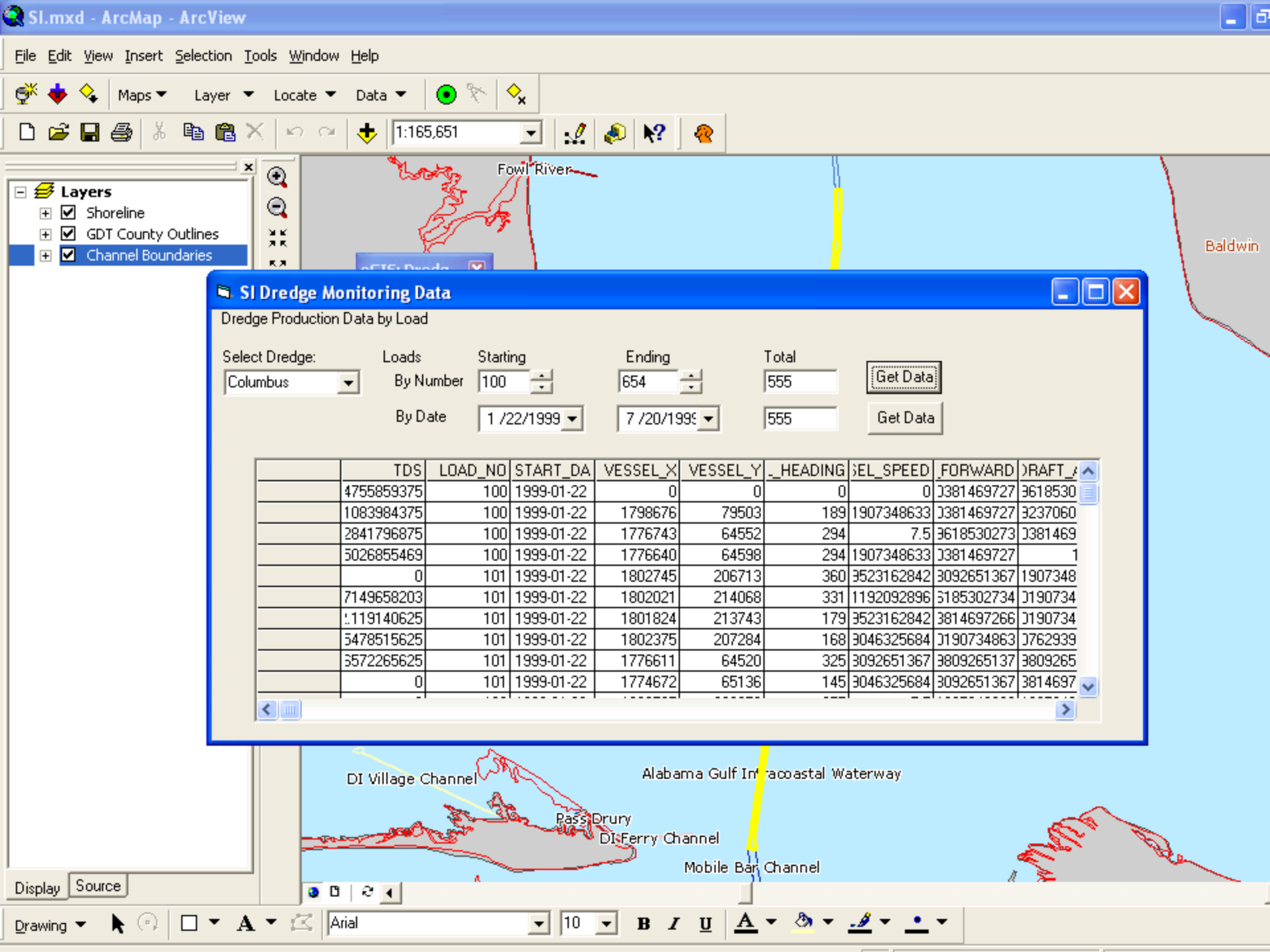



SI.mxd - ArcMap - ArcView
File Edit View Insert Selection Tools Window Help
Maps Layer Locate Data
1:165,651
Layers
Shoreline
GDT County Outlines
Channel Boundaries
Display Source
eGIS: Dredg...
Dredge Info
SI Office - Contract Selector
Dredge Information
Auth
Mobile Harbor
Proj
Mobile Bay Channel
Con#
DACW01-98-C-0067
Item
DACW01-98-C-0067
DACW01-99-C-0046
DACW01-00-C-0023
DACW01-01-C-0003
DACW01-01-C-0007
DACW01-01-C-0019
DACW01-02-C-0015
DACW01-03-C-0004
Fowl River
Mobile
Baldwin
DI Village Channel
Pass Drury
DI Ferry Channel
Mobile Bar Channel
Drawing
Arial
10


SI.mxd - ArcMap - ArcView
File Edit View Insert Selection Tools Window Help
Maps Layer Locate Data
1:165,651
Layers
Shoreline
GDT County Outlines
Channel Boundaries
Display Source
eGIS: Dredg...
Dredge Info
SI Office - Contract Selector
Dredge Information
Auth Mobile Harbor
Proj Mobile Bay Channel
Con# DACW01-98-C-0067
Item 1
Reach Assign#1
Contract Info
Dredge Info
Fowl River
Mobile
Baldwin
DI Village Channel
Pass Drury
DI Ferry Channel
Mobile Bar Channel
Drawing
Arial
10


SI.mxd - ArcMap - ArcView
File Edit View Insert Selection Tools Window Help
Maps Layer Locate Data
1:165,651
Layers
Shoreline
GDT Cour
Channel
Display Source
SI Contract Information
APPROPRI CEFMS_NU ISCURREN PROJCODE CWIS JOBKEY PNS DISTRICT_I FUNDED
False A 98SAM016 True
SI Office - Contract Selector
Dredge Information
Auth Mobile Harbor
Proj Mobile Bay Channel
Con# DACW01-98-C-0067
Item 1
Reach Assign#1
Contract Info
Dredge Info
Fowl River
Mobile
Baldwin
DI Village Channel
Alabama Gulf Intracoastal Waterway
Pass Drury
DI Ferry Channel
Mobile Bar Channel
Drawing
Arial
10


SI.mxd - ArcMap - ArcView
File Edit View Insert Selection Tools Window Help
Maps Layer Locate Data
1:165,651
Layers
Shoreline
GDT County Outlines
Channel Boundaries
Display Source
eGIS: Dredg...
Dredge Info
SI Office - Contract Selector
Dredge Information
Auth Mobile Harbor
Proj Mobile Bay Channel
Con# DACW01-98-C-0067
Item 1
Reach Assign#1
Contract Info
Dredge Info
Fowl River
Mobile
Baldwin
DI Village Channel
Pass Drury
DI Ferry Channel
Mobile Bar Channel
Drawing
Arial
10


SI.mxd - ArcMap - ArcView
File Edit View Insert Selection Tools Window Help
Maps Layer Locate Data
1:165,651
Layers
Shoreline
GDT County Outlines
Channel Boundaries
Display Source
Fowl River
Baldwin
SI Dredge Monitoring Data
Dredge Production Data by Load
Select Dredge:
Columbus
Loads
By Number
Starting
100
Ending
654
Total
555
Get Data
By Date
1 /22/1999
7 /20/199
555
Get Data
TDS LOAD_NO START_DA VESSEL_X VESSEL_Y _HEADING EL_SPEED _FORWARD RAFT_
4755859375 100 1999-01-22 0 0 0 0 381469727 3618530
1083984375 100 1999-01-22 1798676 79503 189 1907348633 381469727 3237060
2841796875 100 1999-01-22 1776743 64552 294 7.5 3618530273 381469
5026855469 100 1999-01-22 1776640 64598 294 1907348633 381469727 1
0 101 1999-01-22 1802745 206713 360 3523162842 3092651367 1907348
7149658203 101 1999-01-22 1802021 214068 331 1192092896 3185302734 190734
119140625 101 1999-01-22 1801824 213743 179 3523162842 3814697266 190734
5478515625 101 1999-01-22 1802375 207284 168 3046325684 190734863 762939
3572265625 101 1999-01-22 1776611 64520 325 3092651367 3809265137 3809265
0 101 1999-01-22 1774672 65136 145 3046325684 3092651367 3814697
DI Village Channel
Alabama Gulf Intracoastal Waterway
Pass Drury
DI Ferry Channel
Mobile Bar Channel
Drawing
Arial
10

Untitled - ArcMap - ArcView

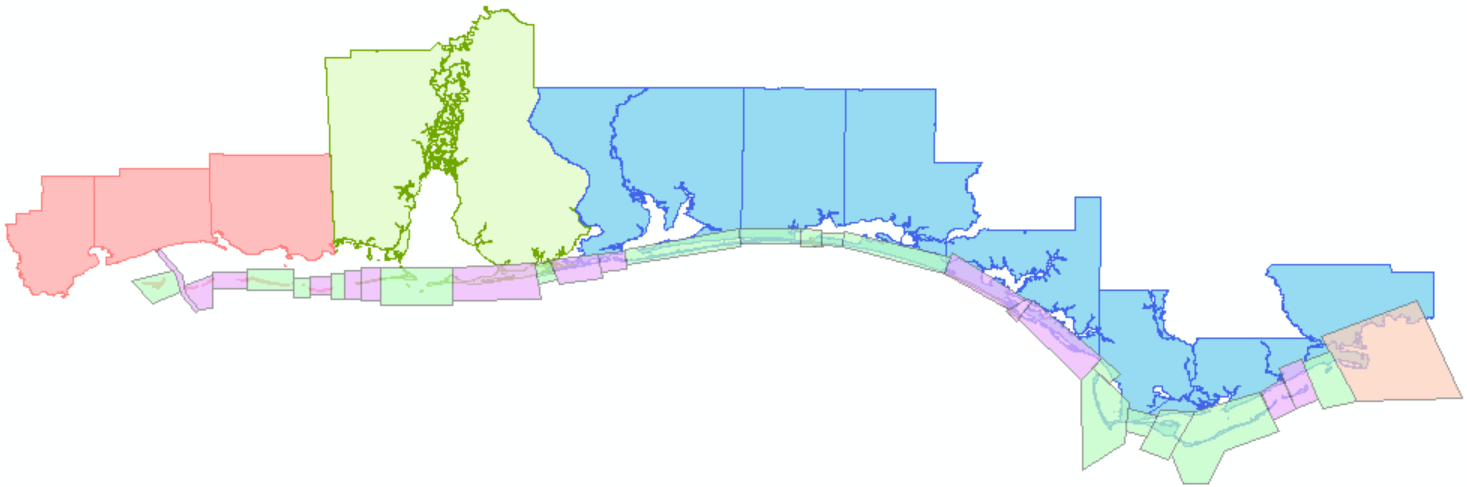
File Edit View Insert Selection Tools Window Help

1:2,476,771

Editor Task: Create New Feature Target:

100%

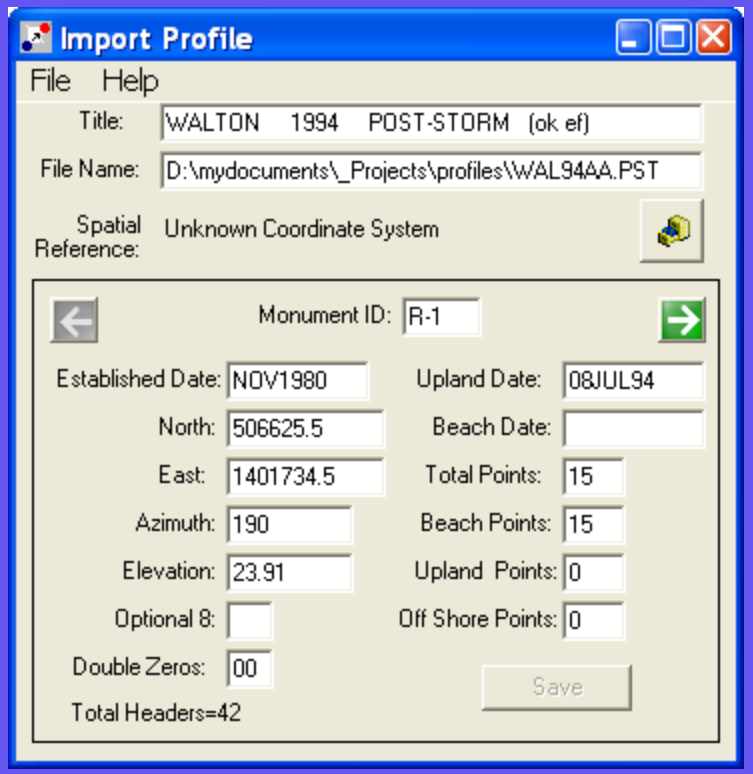
Layers
- xrate_all_dd
  - NETALL
  - -101265.60 - -37032
  - -37032.23 - 2582.52
  - 2582.53 - 37157.13
  - 37157.14 - 84532.74
  - 84532.75 - 181804.6
- regboxes
  - <all other values>
  - LEGEND
  - Cell Balance
  - Cell Gain
  - Cell Loss
- baycounty_dd
- eastpass_dd
- panamacity_dd
- perdidopass_dd
- rsm_dd_gulfcc
  - <all other values>
  - STATE_NAME
  - Alabama
  - Florida
  - Mississippi



Display Source

Profile Application

- Allows users to import and format profile data directly into the database
- This application reads the native format of the profile data and imports it into the appropriate feature class
- Metadata is automatically generated.

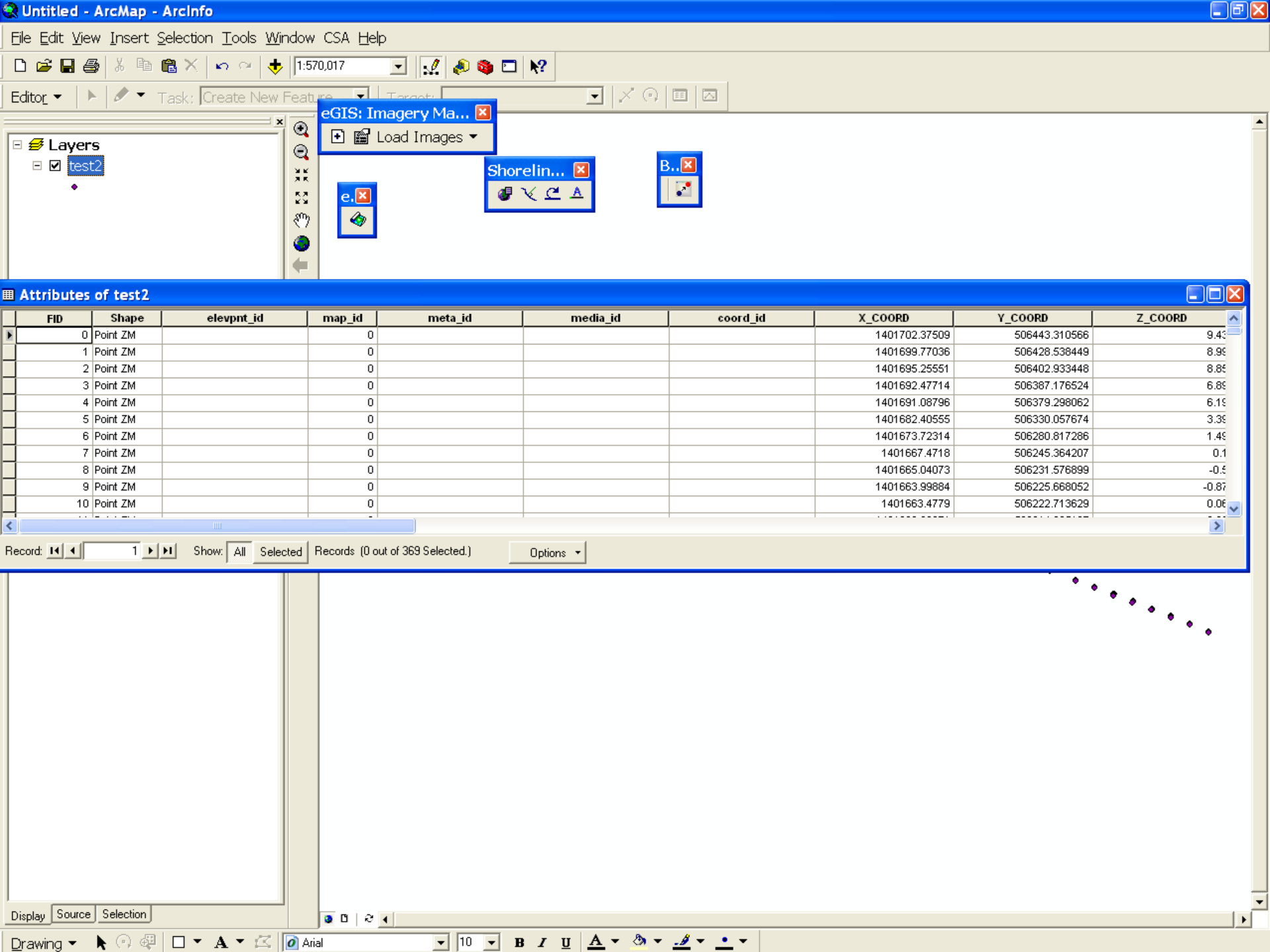


UltraEdit-32 - [D:\mydocuments_Projects\profiles\WAL75AA.PST]

File Edit Search Project View Format Column Macro Advanced Window Help

WAL75AA.PST

```
WALTON   1975   POST-STORM  (ok-beach only-ef) OFFSHORE DATA UNRELIABLE
R-1     JUN1973800  506514.318 1401742.464 190.0022.22                    .0
        14OCT75          37  0 15 22

  -57.0   22.22  -31.0   21.85  -18.0   14.77   -7.0   14.54     .0   13.95
   43.0   10.31   93.0V   6.52  143.0    3.66  162.0    2.62  193.0    3.60
  202.0    4.24  230.0   -1.17  243.0   -1.56  293.0   -2.71  343.0   -3.70
  362.0   -2.10  430.0   -3.50  476.0   -3.50  537.0   -3.90  629.0   -6.50
  785.0  -10.30  834.0  -10.80  947.0  -10.80 1005.0  -10.80 1091.0  -11.70
 1250.0  -14.80 1415.0  -19.70 1580.0  -23.70 1745.0  -27.00 1910.0  -30.00
 2075.0  -32.50 2240.0  -35.50 2405.0  -38.10 2570.0  -40.40 2750.0  -42.40
 2900.0  -44.30 3050.0  -46.20
R-2     JUN1973800  506311.419 1402790.666 190.0021.93                    .0
        14OCT75          17  0 17  0

 -102.0   21.93  -74.0   20.81  -52.0   12.20  -10.0V   8.94   -2.0    7.49
     .0    7.38   48.0    4.67   93.0    3.20   98.0    3.42  115.0    3.81
  141.0    -.49  148.0   -1.21  198.0   -2.12  226.0   -1.10  248.0   -1.17
  298.0   -2.27  348.0   -3.68
R-3     JUN1973800  506201.568 1403815.390 190.0022.95                    .0
        14OCT75          16  0 16  0

  -56.0   22.95  -26.0   22.01  -11.0   14.52   -6.0   14.03     .0   13.37
   33.0V   9.73   44.0    9.08   94.0    5.95  144.0    3.62  171.0    3.05
  194.0    -.65  244.0   -2.32  268.0   -1.32  294.0   -1.38  344.0   -2.61
  394.0   -3.82
R-3A    JUN1973800  506992.099 1404842.944 190.0023.29                    .0
        14OCT75          32  0 11 21

 -110.0   23.29  -60.0   20.60  -10.0V  16.71   -5.0    9.96   40.0    4.52
   71.0    2.41   90.0    2.41  118.0   -1.40  140.0   -3.10  190.0   -4.60
  240.0   -5.33  368.0   -3.40  434.0   -3.80  463.0   -3.50  581.0   -6.30
  626.0   -7.20  731.0   -7.30  890.0   -9.40 1046.0  -12.80 1214.0  -16.00
 1370.0  -19.50 1523.0  -23.10 1670.0  -26.60 1820.0  -29.30 2000.0  -32.70
 2150.0  -35.60 2297.0  -38.20 2465.0  -40.80 2630.0  -43.20 2795.0  -45.50
 2960.0  -47.80 3110.0  -49.40
R-4     JUN1973800  505871.000 1405860.000 190.0025.56                    .0
        14OCT75          12  0 12  0

  -80.0   25.56  -55.0   24.73  -30.0   16.34   20.0V   9.78   70.0    5.96
  120.0    3.09  142.0    4.05  168.0   -1.03  170.0   -1.08  220.0   -2.40
  270.0   -3.35  320.0   -4.11
R-5     JUN1973800  505719.372 1406889.660 190.0027.07                    .0
        14OCT75          15  0 15  0

  -70.0   27.07  -20.0   26.35     .0   25.70    7.0   25.47   14.0   21.43
   30.0   10.92   80.0    5.94  130.0    3.24  164.0    3.08  180.0     .10
  230.0   -2.97  248.0    -.82  280.0   -1.32  330.0   -2.55  380.0   -3.98
R-6     JUN1973800  505467.472 1407901.646 190.0024.82                    .0
        14OCT75          20  0 20  0

 -143.0   24.82  -93.0   24.55  -79.0   24.07  -77.0   21.99  -73.0   21.99
  -62.0   18.07  -43.0   17.29  -21.0V  15.60  -20.5   11.40     .0    9.38
    7.0    8.69   57.0    5.19   99.0    2.90  107.0    3.48  125.0    3.58
  157.0     .44  207.0    -.15  257.0   -1.19  307.0   -2.53  357.0   -4.31
R-6A    JUN1973 00  505346.000 1408909.000 190.0021.67                    .0
        14OCT75          31  0 14 17

     .0   21.25   26.0   16.17   38.0   11.43   50.0   11.46   60.0   11.30
   61.0V  10.03  100.0    7.03  150.0    4.28  200.0    2.17  225.0    3.69
  250.0     .32  300.0    -.53  350.0   -1.28  400.0   -2.83  414.0   -2.30
  549.0   -5.70  717.0   -7.80  867.0  -10.20 1029.0  -13.40 1194.0  -16.70
 1356.0  -20.20 1545.0  -23.50 1710.0  -26.70 1890.0  -29.50 2040.0  -32.30
```


Untitled - ArcMap - ArcInfo
File Edit View Insert Selection Tools Window CSA Help
1:570,017
Editor
Task:
Create New Feature
Target:
eGIS: Imagery Ma...
Load Images
Shorelin...
B...
e.
Layers
test2
Attributes of test2
FID Shape elevpnt_id map_id meta_id media_id coord_id X_COORD Y_COORD Z_COORD
0 Point ZM 0 1401702.37509 506443.310566 9.43
1 Point ZM 0 1401699.77036 506428.538449 8.99
2 Point ZM 0 1401695.25551 506402.933448 8.85
3 Point ZM 0 1401692.47714 506387.176524 6.89
4 Point ZM 0 1401691.08796 506379.298062 6.19
5 Point ZM 0 1401682.40555 506330.057674 3.39
6 Point ZM 0 1401673.72314 506280.817286 1.49
7 Point ZM 0 1401667.4718 506245.364207 0.1
8 Point ZM 0 1401665.04073 506231.576899 -0.5
9 Point ZM 0 1401663.99884 506225.668052 -0.87
10 Point ZM 0 1401663.4779 506222.713629 0.06
Record: 1
Show: All Selected
Records (0 out of 369 Selected.)
Options
Display Source Selection
Drawing
Arial
10

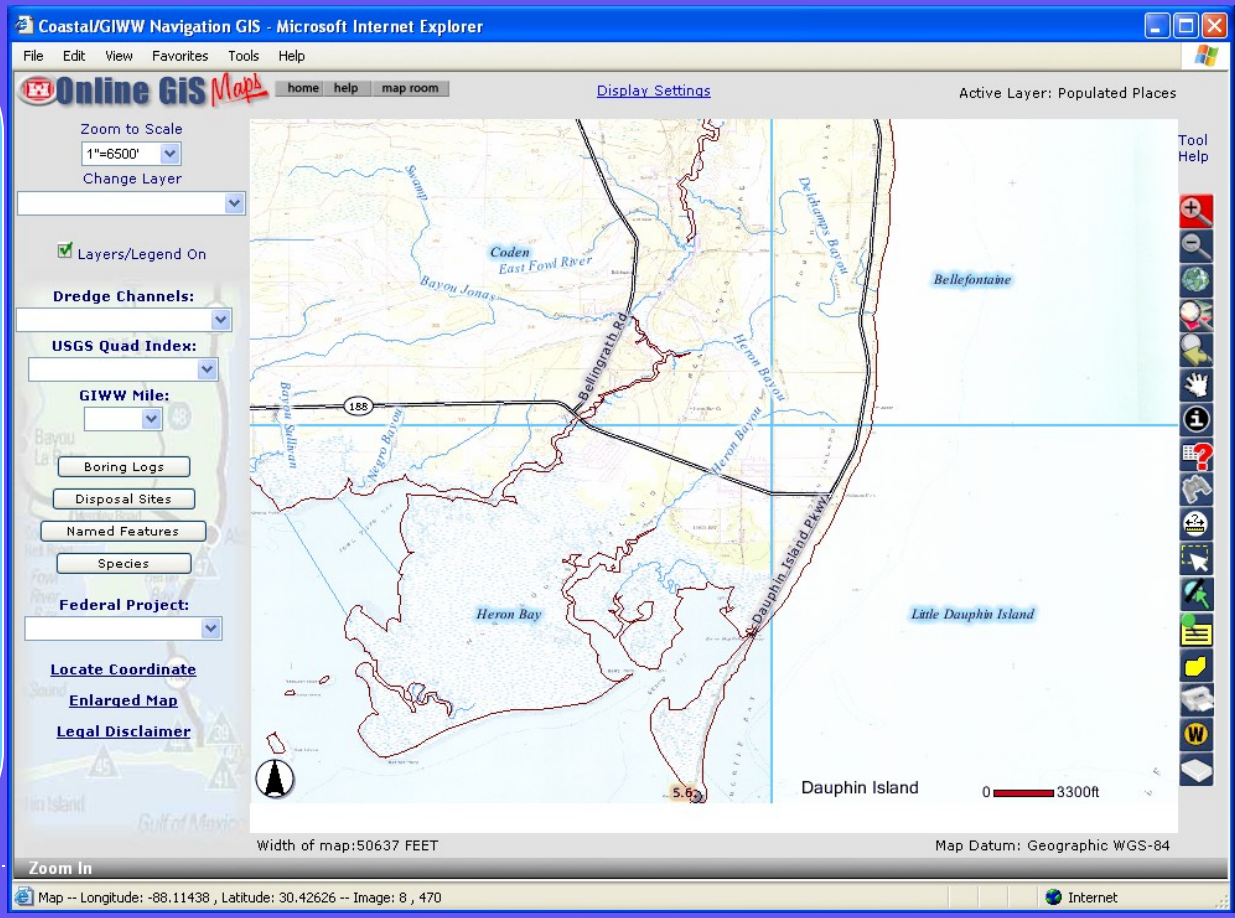
eGIS Online

- ArcIMS = GIS for Everyone!
- All data and applications can be viewed the the **Map Room** of the Spatial Data Branch:
- http://gis.sam.usace.army.mil
- Map services are also available as WMS

The Interface: The Internet

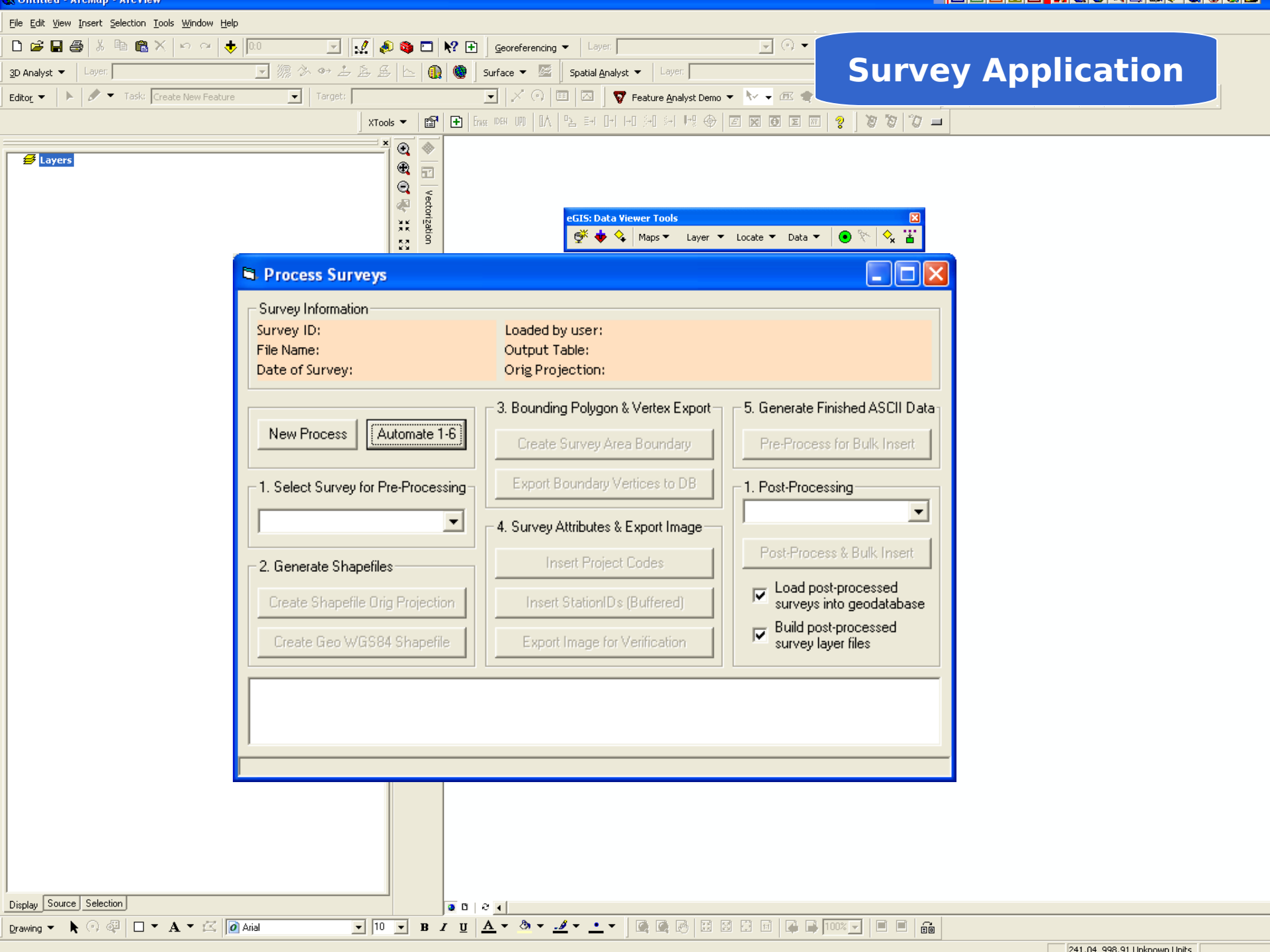
Internet access allows the general user access to same central geodatabase.

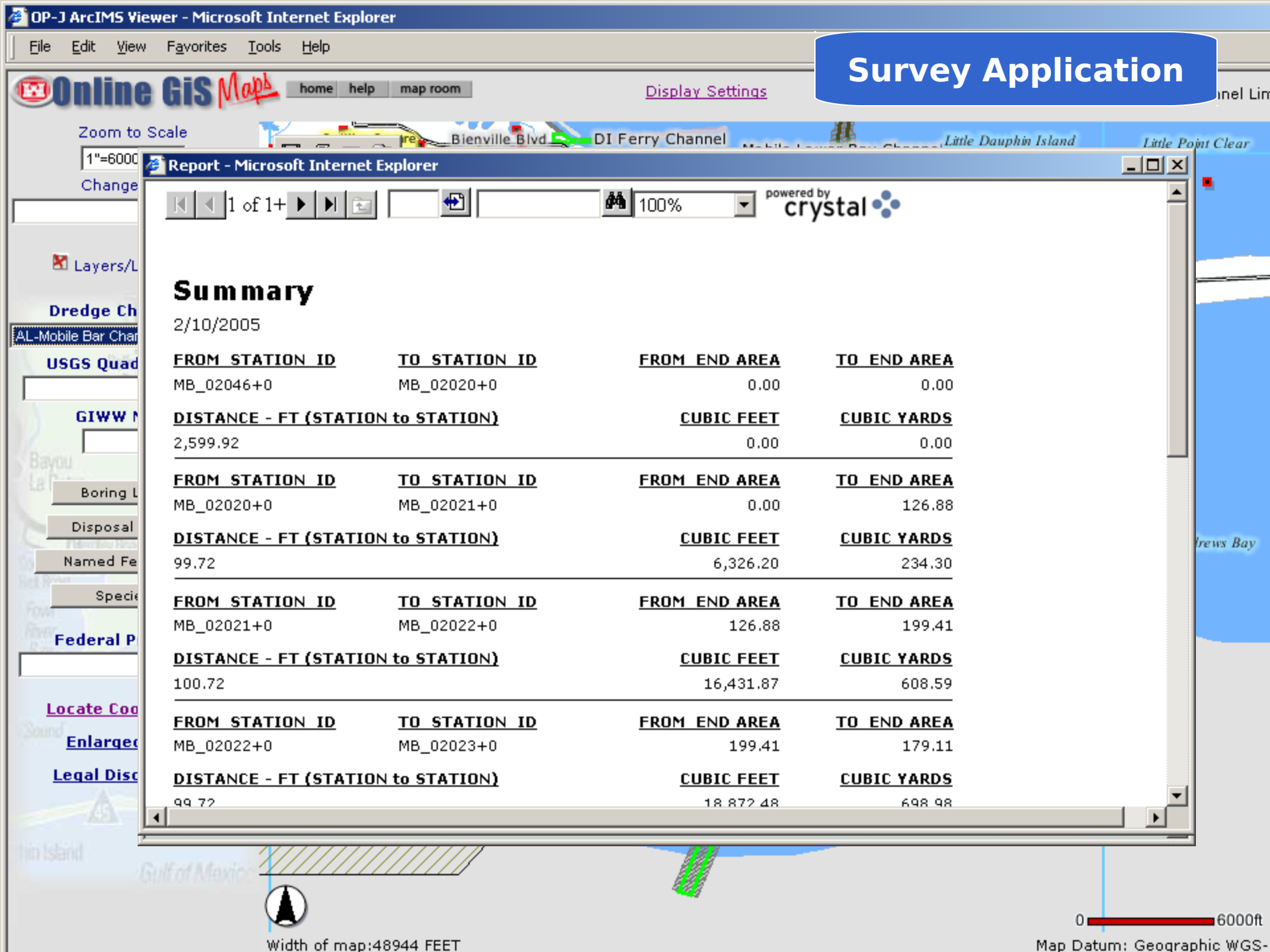
Similar applications have been created for use in a Web environment.



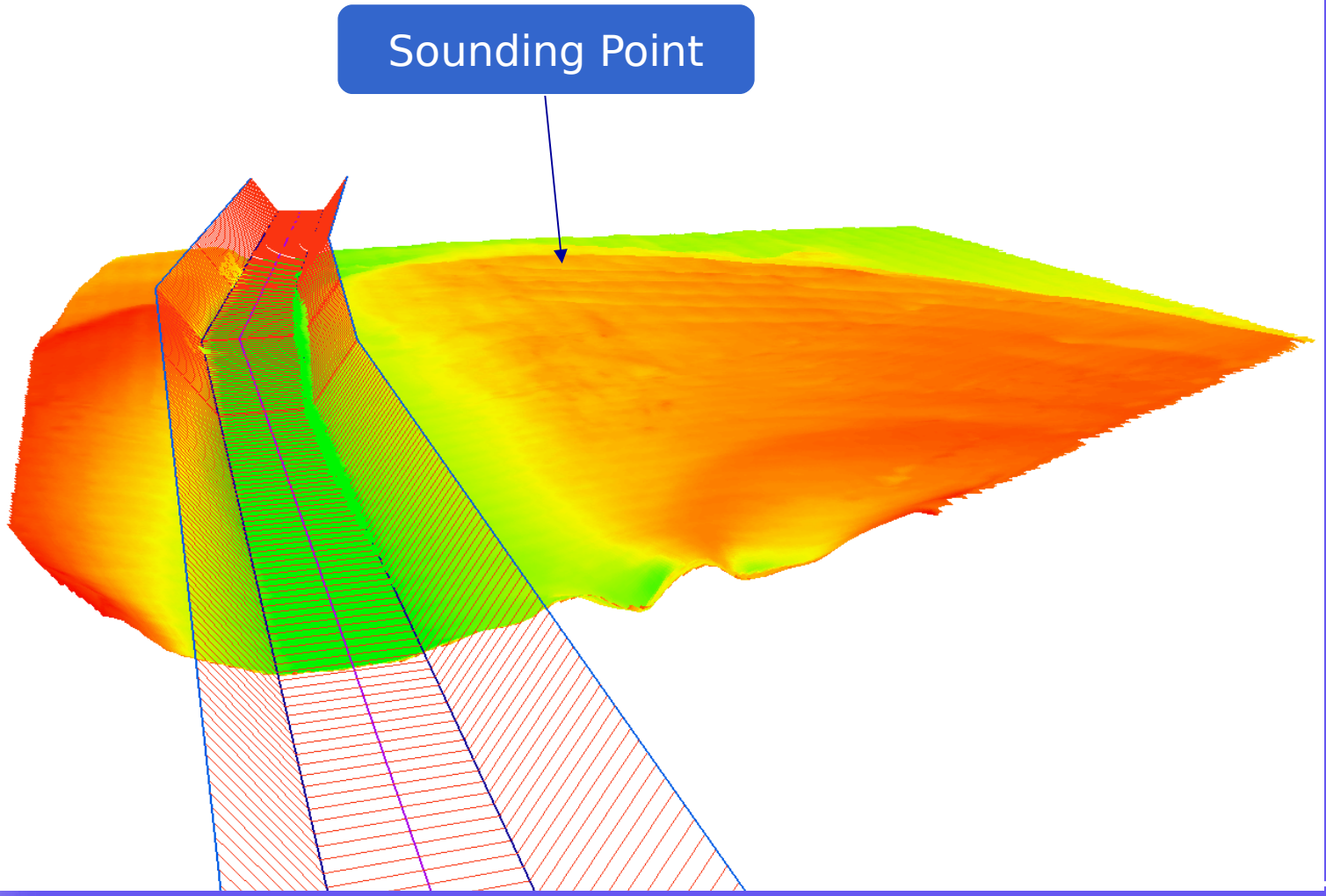
http://gis.sam.usace.army.mil/MapRoom/_C000/Default.asp

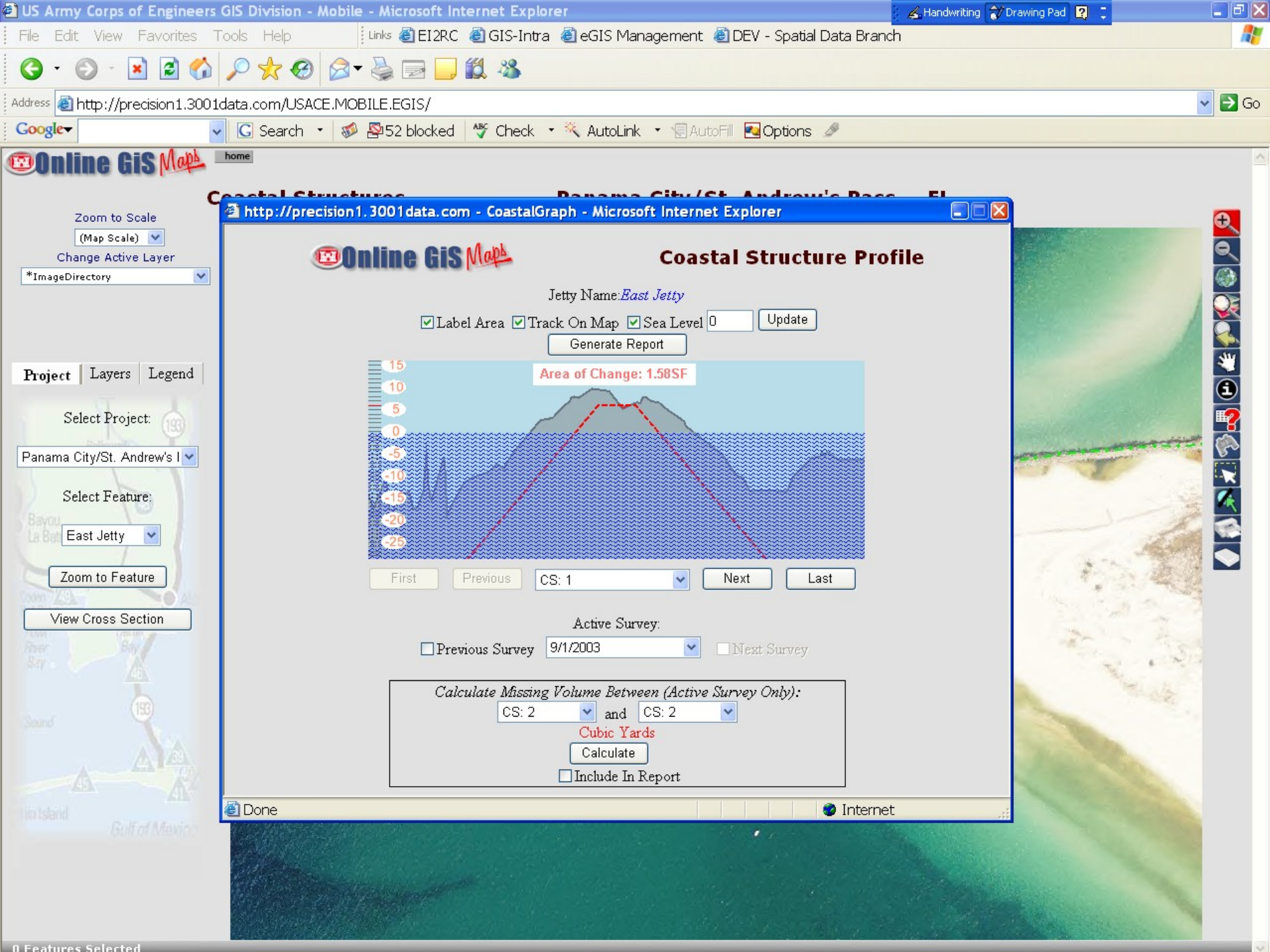
Applications in Development


Survey Application
File Edit View Insert Selection Tools Window Help
Georeferencing
3D Analyst
Surface
Spatial Analyst
Editor
Task: Create New Feature
Target:
Feature Analyst Demo
XTools
Layers
Vectorization
eGIS: Data Viewer Tools
Maps
Layer
Locate
Data
Process Surveys
Survey Information
Survey ID:
File Name:
Date of Survey:
Loaded by user:
Output Table:
Orig Projection:
New Process
Automate 1-6
1. Select Survey for Pre-Processing
2. Generate Shapefiles
Create Shapefile Orig Projection
Create Geo WGS84 Shapefile
3. Bounding Polygon & Vertex Export
Create Survey Area Boundary
Export Boundary Vertices to DB
4. Survey Attributes & Export Image
Insert Project Codes
Insert StationIDs (Buffered)
Export Image for Verification
5. Generate Finished ASCII Data
Pre-Process for Bulk Insert
1. Post-Processing
Post-Process & Bulk Insert
Load post-processed surveys into geodatabase
Build post-processed survey layer files
Display
Source
Selection
Drawing
Arial
10


OP-J ArcIMS Viewer - Microsoft Internet Explorer
File Edit View Favorites Tools Help
Survey Application
Online GIS Maps
home help map room
Display Settings
Zoom to Scale
Bienville Blvd
DI Ferry Channel
Little Dauphin Island
Little Point Clear
Report - Microsoft Internet Explorer
1 of 1+
100%
powered by crystal
Summary
2/10/2005
FROM STATION ID
TO STATION ID
FROM END AREA
TO END AREA
MB_02046+0
MB_02020+0
0.00
0.00
DISTANCE - FT (STATION to STATION)
CUBIC FEET
CUBIC YARDS
2,599.92
0.00
0.00
FROM STATION ID
TO STATION ID
FROM END AREA
TO END AREA
MB_02020+0
MB_02021+0
0.00
126.88
DISTANCE - FT (STATION to STATION)
CUBIC FEET
CUBIC YARDS
99.72
6,326.20
234.30
FROM STATION ID
TO STATION ID
FROM END AREA
TO END AREA
MB_02021+0
MB_02022+0
126.88
199.41
DISTANCE - FT (STATION to STATION)
CUBIC FEET
CUBIC YARDS
100.72
16,431.87
608.59
FROM STATION ID
TO STATION ID
FROM END AREA
TO END AREA
MB_02022+0
MB_02023+0
199.41
179.11
DISTANCE - FT (STATION to STATION)
CUBIC FEET
CUBIC YARDS
99.72
18,872.48
698.98
Width of map:48944 FEET
0
6000ft
Map Datum: Geographic WGS-

Survey Application

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Online GiS Maps
Coastal Structure Profile
Jetty Name:East Jetty
Label Area
Track On Map
Sea Level
0
Update
Generate Report
Area of Change: 1.58SF
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Previous Survey
9/1/2003
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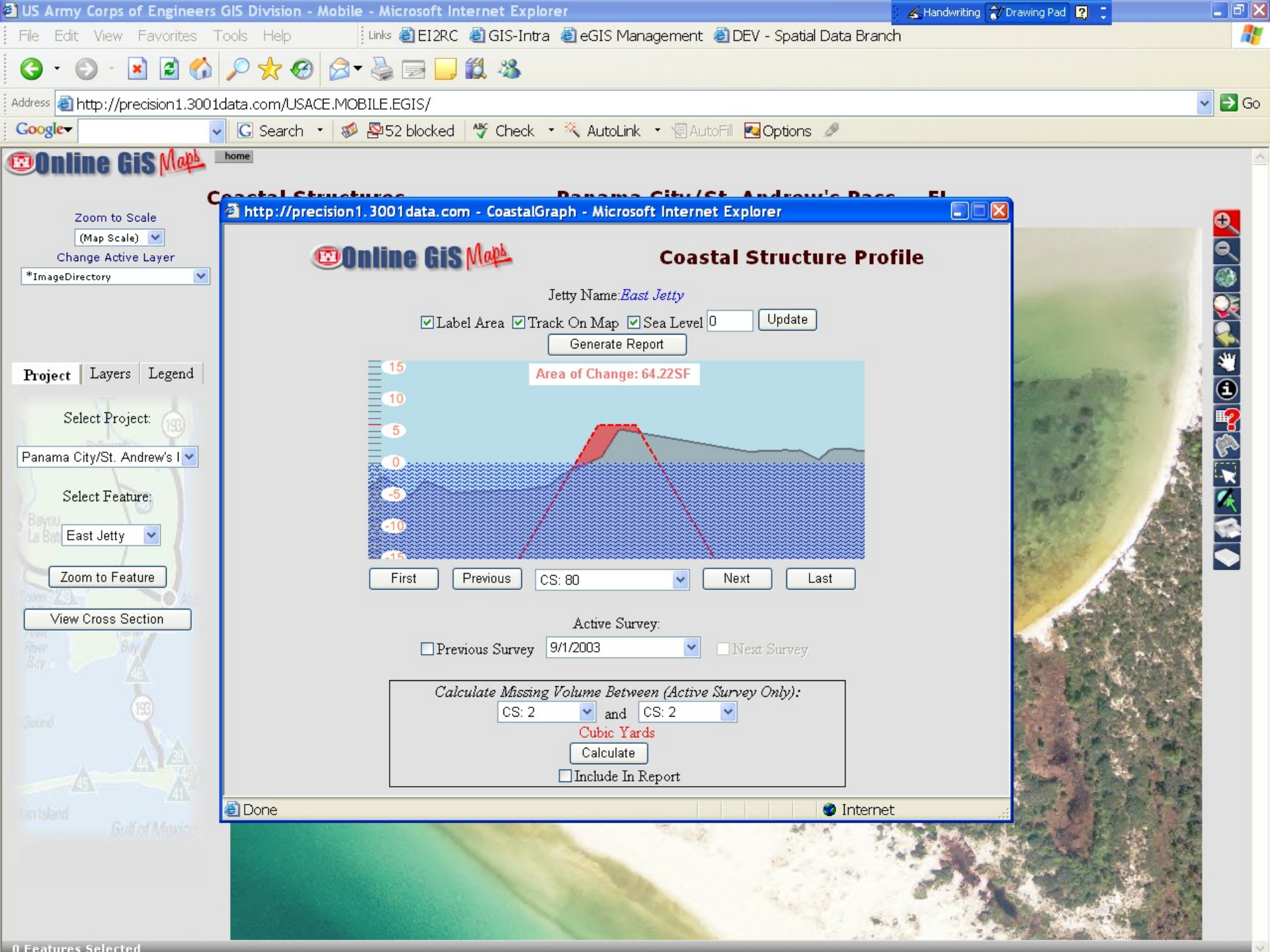
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East Jetty
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http://precision1.3001data.com - CoastalGraph - Microsoft Internet Explorer
Online GiS Maps
Coastal Structure Profile
Jetty Name:East Jetty
Label Area
Track On Map
Sea Level
0
Update
Generate Report
Area of Change: 64.22SF
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Active Survey:
Previous Survey
9/1/2003
Next Survey
Calculate Missing Volume Between (Active Survey Only):
CS: 2
and
CS: 2
Cubic Yards
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Include In Report
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Internet
0 Features Selected

http://precision1.3001data.com - Selected Feature Report - Microsoft Internet Explorer

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Google Search 52 blocked Check AutoLink AutoFill Options

USACE Jetty Condition Report

East Jetty

Online GiS Maps

Survey Information

Survey Date: 9/1/2003
Cross Section Number: 1
Area of Change: 1.58 sf

Jetty Information

Operation Status: RUINED
Latitude: -85.7283
Longitude: 30.1191
Design Cap Elevation: 6
Design Cap Width: 15
Design Base Elevation: -55
Design Base Width: 200

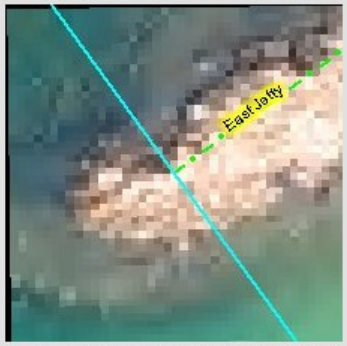

Fig. 1A - *Curent Cross Section Selection*

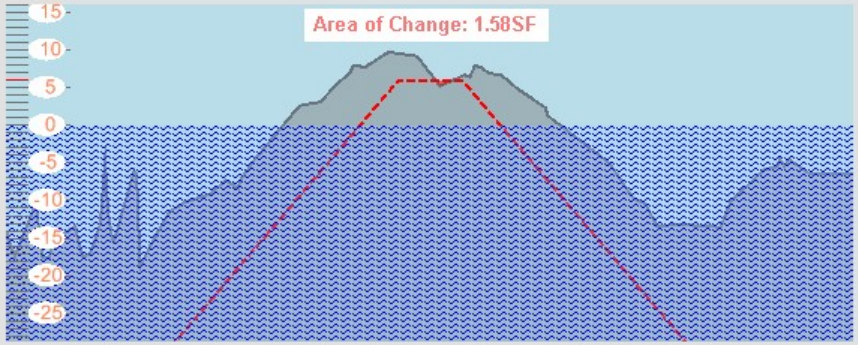

Fig. 1B - *Lidar Generated Cross Section Profile Against Original Desgin Profile*

Jetty Condition:

Comments:

Done Internet

eCoastal

Questions?

For more information on the Spatial Data Branch, visit:

http://gis.sam.usace.army.mil